

Results of the 1993 CQ World-Wide DX CW Contest

BY BOB COX*, K3EST

Did you ever wonder just how much 10 meters weighs? Well, this year we found out. CQ's Editor, Alan, K2EEK, kept track of the number of pounds of logs we shipped out to the log checkers in the 1992 and 1993 WW Contests, and the answer is about 300 pounds! There were 300 less pounds of logs for the 1993 contest compared to 1992. That amount was the decrease in log pages on 10 meters as the sun calms down for a few years. Still there were surprises. VS6WO commented that there was a short opening to the east coast US on 10 at 1200Z long path. After looking through over 2600 CW logs this year, we still got the feeling that yes the sunspot number was down and yes 10 meters is like 160, so now we can concentrate on the other bands. Concentrate is just what people did—over 70 countries on 160 for several stations, over 115 countries on 80, over 150 on 40! The challenge is who will be the first to break 100 countries on 160 in one weekend! It could happen this cycle.

For the first time in any international DX contest we could determine how many records were set. For those of you who think everyone enters to win for the world or their continent, think again. This year on CW 305 new all-time records were set by outstanding operators from Albania to Yugoslavia. That's about a new record for every 8.6 log submissions! On reviewing the scores, the records appeared to fall into two categories which reflected a healthy attitude: operators who competed against their score from the previous year and operators who competed against a friend/competitor within their country. If you operated the required 12 hours for a single operator, you might have been eligible for one of the more than 900 certificates we handed out on each mode! So to sum up the CQ WW CW: over 240 countries from all zones, over 22,000 participants, 2638 log submissions, 305 all-time records, over 900 certificates, and 48 trophies — Fun, Challenge, and Skill.

Enough about the contest as a whole. Let's look at those outstanding individual efforts.

All Band

A cool breeze blew across the barren landscape. Looking at the brown dirt, blue sky, and blue water, it seemed like a strange place to strive for world recognition. The villas were at a QTH as barren as the moon. The only hint of success lay in the blue ocean, which filled the eyes for 270 degrees. Here was the place he had chosen so carefully years before. Here was the QTH of EA8EA.

The operator was busy adjusting his internal clock to start at 0000Z. He would wake up just before the bell rang. The operator on this adventure was Ville, OH2MM, a prenatal physi-

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The Gibraltar ARS club meeting produced this photo. I guess you have worked a few of these guys. Front (left to right): ZB0E, G3MRC and XYL, ZB2X, and ZB2AZ. Rear (left to right): ZB2BL, LA9SN, and ZB0Z.

cian whose other passion is the competition of the CQ WW. When the final bell rang, his well thought-out plans allowed him to repeat as world champion.

Second place went to the SSB champion, John, W2GD, pushing the keyboard and paddle at P40W. Over on the "rock," Jorma, ZB2X (OH2KI), was surely in the right place, as he not only ran away from the competition in Europe, but vaulted himself to a new European record. Three northern Europeans broke into the top ten group: OH1AF, OH6WZ, OZ1LO.

It was a real horse race in the USA. Finally, after it all settled out, Tom, K1KI, operating from his new QTH on the Connecticut border, edged out Jeff, K1ZM/2, whose towers can see the Hudson river. All the top 10 scores reflect months of preparation and years of practice. Lest you think that it takes lots of towers and aluminum, check out KT3Y's score. Phil did it with no towers or aluminum, only trees and wire.

High Bands

Ole sol where are ye? That was the groan that ushered in the sunspot low. First to take a beating from a lack of a complexion problem on the sun was 28 MHz. The entire drop in the number of logs submitted can be attributed to 10. Only the country of Uruguay figured out that low sunspot is good. CV5A, who was #1 in the world, and CX5BW #2 far outdistanced any other entry. No northern hemisphere operator broke 100K. The closest was S51AY hotly pursued by K4XS. Two low-power stations broke

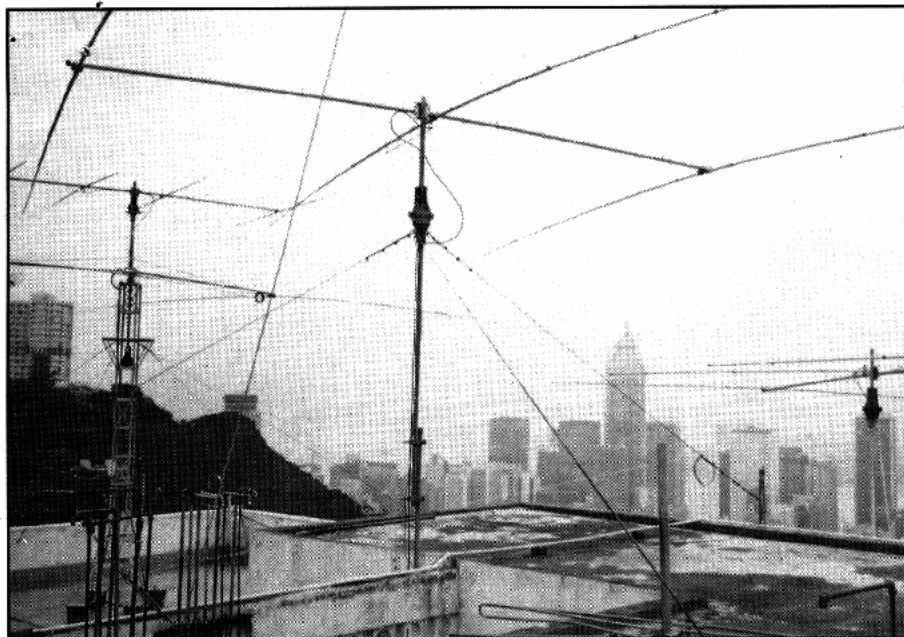
into the high-power top six! As I recall from the last two cycles, there will come a time when 160 will beat 10. If you can speak Spanish or Portuguese, you will probably triple your QSOs on 10.

Knowing what to do when the sun shuts down, Bob, K4UEE, headed south to guide ZP0Y to a new World's record on 21 MHz. It was a squeaker, but Bob's extra low number of errors in his log helped his victory. Not that far behind was ZD8VJ, who left ZD8 after giving everyone thousands of QSOs from the island of turtles, birds, and log periodics. As if it were not enough to be the executive secretary of the ARRL, Dave, K1ZZ, also proves the fact that a photographic memory for calls proves there are no unique QSOs. Dave finished as the top USA 15 meter score and lowest unique rate of any high-power log. Congratulations. Putting the famous club station GW8GT to good use, G4IFB keyed to top European honors.

Twenty meters once again demonstrated that you can be almost anywhere and have a chance to come out in the top scores. Marko, OH6DO, traveled to the rain forests of Suriname to put PZ5JR into the number one spot. Meanwhile, Bob, KQ2M, was traveling north on interstate 95 to settle down into a chair at KM1H's QTH. Bob finished second over Yale professor Dave, K2SS/1. Out west Gary, VE7NTT, enjoyed putting CH7SZ on the band. Gary had the most accurate log of all the top competitors. In Europe OH2MAM traveled over to the country of 10,000 islands to key OH0DX to victory over perennial top scorer Tine, S50A.

TROPHY WINNERS AND DONORS

- SINGLE OPERATOR, ALL BAND**
World
EA8EA (Opr. Ville Hillesmaa, OH2MM)
 Donor: Albert Kahn, K4FW
 W9IOP Memorial
- World Low Power**
Felipe J. Hernandez, NP4Z
 Donor: Slovenia Contest Club
- World Single Operator Assisted**
John Sluymmer, VE3EJ
 Donor: Snake River Contest Club
- World QRPp**
7Z2AB (Opr. David Franks, K2XR)
 Donor: Gene Walsh, N2AA
- U.S.A.**
Thomas Frenaye, K1KI
 Donor: Frankford Radio Club
- Canada**
David Goodwin, CH2ZP
 Donor: Canadian DX Association
- Caribbean/C.A.**
T11C (Opr. Larry Tyree, N6TR)
 Donor: Larry Brockman, N6AR
- Europe**
ZB2X (Opr. Jorma Saloranta, OH2KI)
 Donor: Edward Bissell, W3AU
- Africa**
ZD8Z (Opr. James Nieger, N6TJ)
 Donor: Gordon Marshall, W6RR
- Asia**
JY8VJ (Opr. Bernd Laenger, DL1VJ)
 Donor: Japan CQ Publishing Company Ltd.
- Japan**
Satoshi Hara, JH5FXP
 Donor: Japan Crazy Contesters Club
- Oceania**
NH6T (Opr. Ward Silver, NØAX)
 Donor: Maui Amateur Radio Club
- South America**
P40W (Opr. John Crovelli, W2GD)
 Donor: Venezuela DX Club
- SINGLE OPERATOR, SINGLE BAND**
World—28 MHz
Ariel Vazquez, CV5A
 Donor: Joel Chalmers, KG6DX
- World—21 MHz**
ZPØY (Opr. Robert Allphin Jr., K4UEE)
 Donor: Don Busick, K5AAD
 N5JJ Memorial
- World—14 MHz**
PZ5JR (Opr. Marko Myllymaki, OH6DO)
 Donor: North Jersey DX Assn.
 W2JT Memorial
- World—7 MHz**
C41A (Opr. Ivo Bezer, 5B4ADA)
 Donor: Alex M. Kasevich, VP2MM
- World—3.5 MHz**
John Devoldere, ON4UN
 Donor: Fred Capossela, K6SSS
- World—1.8 MHz**
Richard Kline, 4X4NJ
 Donor: Kenneth Byers, Jr., K4TEA
- USA—28 MHz**
Wilbert Kollenbaum, K4XS
 Donor: CQ Magazine
- USA—21 MHz**
David Sumner, K1ZZ
 Donor: Wayne Carroll, W4MPY
- USA—14 MHz**
KM1H (Opr. Robert Shoheit, KQ2M)
 Donor: Northern Illinois DX Association
- USA—7 MHz**
John Kenny, W1RR
 Donor: Jan Perkins, N6AW
 W6AM Memorial
- USA—3.5 MHz**
Robye L. Lahlum, W1MK
 Donor: CQ Magazine
- USA—1.8 MHz**
Norman L. Rivers, W1BYH
 Donor: Peter Hutter, WW2Y
- Canada—14 MHz**
CH7SZ (Opr. Gary Caldwell, VE7NTT)
 Donor: Radio Amateurs of Canada
- Caribbean/Central America—7 MHz**
FG5BG (Opr. Bruce D. Lee, KD6WW)
 Donor: Snake River Contest Club
- Europe—28 MHz**
Arpad Berke, S51AY
 Donor: Southern New England DX Club
- Europe—21 MHz**
GW8GT (Opr. G. T. Hinson, G4IFB)
 Donor: Robert Naumann, KR2J
- Europe—14 MHz**
OHØDX (Opr. Jukka Kulha, OH2MAM)
 Donor: Maud Slater
 G3FXB Memorial
- Europe—7 MHz**
S50S (Opr. Drago Turin, Jr., S59UN)
 Donor: Ivo Pezer, 5B4ADA/T93A
- Europe—3.5 MHz**
SN3A (Opr. Czeslaw Dubicki, SP3HLM)
 Donor: Frankford Radio Club
 K3VW Memorial
- Japan—21 MHz**
Tadao Katsuta, JH7DNO
 Donor: DX Family Foundation
- MULTI-OPERATOR**
SINGLE TRANSMITTER
World
J6DX (Oprs. K9BQL, N9AG, W8OK, W8QID, WB8ENR, WD8IXE)
 Donor: Anthony Susen, W3AOH
- U.S.A.**
KC1XX (Oprs. KC1XX, AD1C, KM3T)
 Donor: Douglas Zwiebel, KR2Q
- Canada**
CH9DH (Oprs. K2NJ, VE1DH, VE1DX, VE1IW, VE1WH)
 Donor: Eastern Canadian DX Assn.
- Caribbean/Central America**
ZF2WW
 (Oprs. G3SXW, K5VT, K7GE, KC7V)
 Donor: No. Nevada DXC
- Africa**
CR3W (Oprs. DJ2YE, DK3KD, DL1EK, DL5BWE, DL5JQ)
 Donor: Ralph Bellas, Jr., K9ZO
- Europe**
IQ4A (Oprs. I4VEQ, I4LCK, I4IND, I4EAT, I4IKW, I4TJE, I4PVP, IK2NCJ, IK4DCT, IK4DKO, IK4DWK, IK4DZF, IK4QJH)
 Donor: Friends of K3AO
 K3AO Memorial
- Oceania**
DX1HB (Oprs. JA1KJK, JA1WLN, JR1NHD, 7K1CXV)
 Donor: Junichi Tanaka, JH4RHF
- MULTI-OPERATOR**
MULTI-TRANSMITTER
World
EA9EO
 Donor: Hazard Reeves, K2GL Memorial
- U.S.A.**
W3LPL (Oprs. W3LPL, WB2EKK, WR3E, W3EKT, N3GB, AI3M, K3NA, KF3P, KE3Q, K3RA, W3ZZ, W4BQF, KO7V, KE9A)
 Donor: Bob Ferrero, W6RJ
 N6RJ Memorial
- Europe**
HG73DX (Oprs. HA1TJ, HA1TD, HA1DAC, HA1DAE, HA1AH, HA1YA, HA1YU, HA1WD, HA5GF, HA5IW, HA6WX, HA5AWH, HA5ML, HA5CCC, HA5FM, HA7VB, HA7RY, HA5OM, HA5TI, HA5WE, HA6NF, HA6OQ, HA6NY, HA6ON, HA6ND, HA6PX)
 Donor: Finnish Amateur Radio League
- World—SSB/CW Combined**
HG73DX: 34,272,663
 Donor: Ehrhorn Technological Operations
- CONTEST EXPEDITIONS**
World Single Operator
PYØF (Opr. Jose Carlos Cardoso Nunes, CT1BOH)
 Donor: Yankee Clipper Contest Club
- World—Multi-Operator**
AHØK (Oprs. AHØK, JE1JKL, JP1OGL, JE2JCV, JL2TZC, JJ3OLZ, JR7OMD, JE7BIZ, JA8RWU, JA9VDA)
 Donor: Bill Schneider, K2TT
- SPECIAL SINGLE OPERATOR AWARD**
World—All Band Under 18 years old
Darrel R. Craig, Jr., BV/KK6BB
 Donor: Radio Bookstore
- CLUB**
World, Combined SSB/CW
Frankford Radio Club: 356,679,629
 Donor: CQ Magazine
 W1WY Memorial
- Non-USA SSB/CW**
Rhein-Ruhr DX Association: 97,403,030
 Donor: Northern California Contest Club
 N6AUJ Memorial



Ever wonder how much space you need for a multi-multi setup? VS6WO answers that question.



The "Rocks of Madeira" provide the background for the CR3W crew. Left to right are DL1EK, DJ2YE, DK3KD, DL5BWE, SWL-Jurgen, and DL5ZQ.

Low Bands

On 7 MHz two humanitarians who work for the United Nations gave us all good multipliers. Thanks to Ivo, C41A (T93A), who finished first, and Carl, OH6XY, stationed in southern Croatia, who operated PJ9Y to a second-place finish.

Over in Europe Drago, S59UN, camouflaged as S50S, took top honors from beautiful NE Slovenia (the sunny side of the Alps!). Second place went to San Francisco lawyer and all-around great operator Tom, N6RA, operating from ED6XXX. He commented on how many top-gun US guys got his call wrong on the first attempt.

Engineer and experimenter W1RR led the way in the US over Maryland's K3WX with AH2F operating. Both put out terrific signals. Special mention is made of the outstanding zone total of Kon. N6RO, ED6XXX, and UB4HO. Thirtynine is tough on 20 meters, let alone on 40.

Some fireworks were produced on 3.5 MHz with John, Mr. Low Bands, ON4UN, running away from Jerzy, SP3HLM, operating from SN3A. Of note is UN2L, who finished fifth in the world. This is none other than Willy, UA9BA (ex-UW9AR, UZ9AYA, UK9AAN). Willy speaks better English than I ever will. Another European effort of note was the DXpedition of OH1VR and OH2BBF to Market Reef in November! Shades of icebergs! Seppo and OH2BBF proved that determination over-

comes almost everything. Thanks, guys. USA top honors went to W1MK, who once again showed that it is good to be a W1. Second place went to consistent 80 meter buff WE3C.

Of course, the action on 160 meters was in Europe. There are over 60 countries on top band on that continent alone. So if you can work Europe and it counts for three points, then you are in the right place. That is where Riki, 4X4NJ, found himself. Operating with a vertical, he edged out GW3YDX, who did a terrific job from within Europe. Over in North America VO1NA took the bronze medal. In the US it was a real battle between W1BYH and WB9Z out Illinois way. It was nice to see "Mr. Neat Log" (KH6CC) come in number seven for the band. The top three scores on 160 were all very close, and from three different continents. And the top seven included a fourth!

Low Power

Check out the World low-power all-band Top Scores box. You cannot imagine a better mix than what you see. The top five stations were from five different continents! Walking away with the top slot was NP4Z. Over one million points separated him from EL2PP (8NHJ at the key), who finished second. The real fight was over second through sixth place. Congratulations to EL2PP, NH6T, with Ward NØAX, A71CW, and RB5QDP for jobs well done. Running low power is very much fun!

It was another close battle for low power all band with K2ZJ in New York state coming out the winner over K2SG in northern New Jersey. John used a pair of Kenwoods to accumulate about 120 more mults than Tony. And despite Tony's nearly 300 QSO advantage, it wasn't enough to turn the tide. It is really amazing just how different their breakdowns are, and yet how close these two scores are (about a 3% spread).

The top ten low-power scores are representative geographically of the continent of Europe. RB5QDP from the southeast Ukraine showed what 100 watts can do if it's pushed. Second went to Franc, S59AA, operating club station S5ØL high on a mountaintop.

QRP

In the QRP category it was 7Z2AB winning for the world. This gave operator Dave, K2XR, a QRP victory on both modes. Using a two-element 40 at 18 meters, Dave's 5 watts plowed a hole in the band to net more than 900 QSOs. And with over 500 QSOs on both 10 and 15, he won easily. It was also interesting to see how many stations "worked" 7Z1AB. Try listening instead of watching packet. And as for the many stations who worked ZZ2AB, you blew it big time! Of course, your computer software put the QSO in zone 11! Taking second spot for the world and first place USA was super QRPer Randy, AA2U. As a testament to Randy's skill and a clear indication of the changing solar cycle, Randy worked 81 countries on 40 meters alone. Not bad for 5 watts in 48 hours!

Assisted

Winning on both modes in any category is not easy. Yet that's what John, VE3EJ, managed to make look easy. John's secret is not to

TOP SCORES

WORLD

<p>SINGLE OPERATOR HIGH POWER</p> <p>All Band</p> <p>EA8EA 12,703,752 P4ØW 11,139,048 P4ØN 10,640,385 PYØF 10,591,744 T11C 9,123,817 ZD8Z 9,086,940 6V6U 8,949,808 9Y4H 8,262,560 HD9N 7,915,320 7Q7OO 7,173,846</p> <p>28 MHz</p> <p>CV5A 940,532 CX5BW 660,500 S51AY 77,405 K4XS 66,600 F5NBX 42,360 HK3YH 37,962</p> <p>21 MHz</p> <p>ZPØY 1,869,978 ZD8VJ 1,650,663 ZX5CW 1,108,242 KP2A 964,960</p>	<p>9Y4VU 937,284 CX3ABE 652,795</p> <p>14 MHz</p> <p>PZ5JR 1,278,083 KM1H 1,001,035 OHØDX 834,912 K2SS/1 801,534 CH7SZ 814,506 VE1ST 790,444</p> <p>7 MHz</p> <p>C41A 1,307,944 PJ9Y 1,050,966 FG5BG 992,654 S5ØS 950,400 ED6XXX 929,660 OM3RM 736,016</p> <p>3.5 MHz</p> <p>ON4UN 630,568 SN3A 471,138 OM3NA 393,231 UN2L 366,938 OJØ/OH1VR 346,875 W1MK 340,431</p> <p>1.8 MHz</p> <p>4X4NJ 157,896</p>	<p>GW3YDX 154,376 VO1NA 148,500 OY9JD 128,847 DK6WL 107,464 GIØKOW 77,142</p> <p>LOW POWER All Band</p> <p>NP4Z 3,948,966 EL2FP 2,594,032 A71CW 2,484,460 NH6T 2,461,536 RF5QDP 2,279,600 NP2I 2,202,228 S5\$L 1,921,198 K2ZJ 1,904,654 K2SG 1,845,006 TM6GG 1,640,712</p> <p>28 MHz</p> <p>VK4XA 125,366 FY2NQ 114,400 LW4DIR 61,248 T93M 37,694 9A2LH 19,275 S59ZA 16,948</p>	<p>21 MHz</p> <p>CX6VM 622,544 N8II 324,144 LU4FD 294,372 U5WF 251,482 HA8RH 225,776 EC8AXM 224,640</p> <p>14 MHz</p> <p>VO5SF 273,060 YL2GN 261,702 UV3HD 257,040 K9KU 231,768 JH7JVJ 223,250 JR2BNF/1 167,356</p> <p>7 MHz</p> <p>4N7N 609,738 ZL7FD 432,200 CH7AHA 384,300 UAØJQ 354,311 TA2BD 297,528 RAØFA 273,921</p> <p>3.5 MHz</p> <p>S59CAB 147,486 HA8FW 122,580 YTØT 120,712</p>	<p>UAØSMM 82,368 RA1ZA 75,636 HA8IB 74,918</p> <p>1.8 MHz</p> <p>HA8EK 67,014 UA9AT 47,334 SP2FOV 37,329 SV2BFN 34,740 SP9GDB 25,048 DL3JSW 23,754</p> <p>QRP All Band</p> <p>7Z2AB 2,757,770 AA2U 763,156 G4BWP 685,500 K5RX 602,268 K1CGJ 560,604 JA6GCE 420,549 UB4FXX 382,872 SM3CCT 333,132 KW2P 318,108 KA1CZF 314,632</p> <p>ASSISTED All Band</p> <p>VE3EJ 6,073,614</p>	<p>4X/S59PR 5,677,000 K3WW 5,056,464 K1DG 4,560,150 K5NA/2 4,490,980 4U1ITU 4,026,308 W2UP/3 4,007,604 DK3GI 3,737,205 W1PH 3,528,104 AA2DU/1 3,510,573</p> <p>MULTI-OPERATOR SINGLE TRANSMITTER</p> <p>J6DX 11,691,029 4M5I 11,222,746 L4ØF 10,236,352 VP9AD 9,323,424 ZF2WW 8,385,030 V31KF 8,023,006</p> <p>MULTI-OPERATOR MULTI-TRANSMITTER</p> <p>EA9EO 27,553,203 AHØK 21,029,060 HG73DX 15,619,392 W3LPL 15,338,424 K1AR 15,020,460 9A1A 14,107,510</p>
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EUROPE

<p>SINGLE OPERATOR HIGH POWER</p> <p>All Band</p> <p>ZB2X 6,129,904 4Ø7AV 3,784,480 G4BUO 3,651,156 DL2NBU 3,156,673 OZ1LO 2,819,322 OH1AF 2,569,424 S51BO 2,546,440 OH6WZ 2,264,990 DL6RAI 2,152,254 EO5U 2,098,759</p> <p>28 MHz</p> <p>S51AY 77,405 F5NBX 42,224 SP5DDJ 10,792 OH5PA 3,225</p> <p>21 MHz</p> <p>GW8GT 601,160 TM2O 545,160 S58A 500,066 G3KDB 481,712</p>	<p>9A5Y 480,655 EA2IA 148,013</p> <p>14 MHz</p> <p>OHØDX 834,912 S5ØA 779,610 IB9T 747,775 IT9A 742,417 OK5A 735,301 S51AW 600,682</p> <p>7 MHz</p> <p>S5ØS 950,400 ED6XXX 929,660 OM3RM 736,016 _X4B 708,247 OK1AYP 662,375 OH7MA 651,672</p> <p>3.5 MHz</p> <p>ON4UN 630,568 SN3A 471,138 OM3NA 393,231 OJØ/OH1VR 346,875 OM3PA 336,950 LY33S 322,432</p>	<p>1.8 MHz</p> <p>GW3YDX 154,376 OY9JD 128,847 DK6WL 107,464 GIØKOW 77,142 9A2TW 67,456 IT9ZGY 66,992</p> <p>LOW POWER All Band</p> <p>PB5QDP 2,279,600 S5ØL 1,921,198 TM6GG 1,640,712 GJ/K2WR 1,097,580 OH3LIM 984,948 G3SWH 916,158 S52OP 863,330 F5JCB 847,735 DL4YBM 793,230 OZ8AE 774,237</p> <p>28 MHz</p> <p>T93M 37,694 9A2LH 19,275 S59ZA 16,948</p>	<p>RA3LB 6,875 OK1XW 6,572 OK1BMW 5,661</p> <p>21 MHz</p> <p>U5WF 251,482 HA8RH 225,776 S51QZ 217,722 IT9AF 175,161 DL1YAW 155,832 SP5JTR 142,155</p> <p>14 MHz</p> <p>YL2GN 261,702 UV3HD 257,040 OH6LBW 160,140 UB4IBF 140,280 UB3IQ 136,680 IR6A 133,875</p>	<p>SP9NLK 106,425 OH4ML 93,800 I6MU 79,076</p> <p>3.5 MHz</p> <p>S59CAB 147,486 HA8FW 122,580 HA8IB 74,918 HA8RJ 72,300 SV2BOH 70,092 RB5PE 58,256</p> <p>1.8 MHz</p> <p>HA8EK 67,014 SP2FCV 37,329 SV2BFN 34,740 SP9GDB 25,048 DL3JSW 23,754 ES1AR 23,040</p> <p>ASSISTED All Band</p> <p>4U1ITU 4,026,308 DK3GI 3,737,205 DJ2YA 2,356,200</p>	<p>DL2MEH 2,067,000 DJ4AX 1,642,576 S56A 1,553,664 G3XTT 1,502,501 DL1HCM 1,410,347 DJ3NY 1,329,952 G3TXF 1,301,300</p> <p>MULTI-OPERATOR SINGLE TRANSMITTER</p> <p>IQ4A 7,510,110 UW2F 7,192,076 TM9C 6,340,554 Z3ØM 6,281,040 L29A 5,881,572 IR2W 5,734,058</p> <p>MULTI-OPERATOR MULTI-TRANSMITTER</p> <p>HG73DX 15,619,392 9A1A 14,107,510 UR8J 10,622,640 RU1A 8,113,152 US7I 7,492,578 R6L 6,836,960</p>
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USA

<p>SINGLE OPERATOR HIGH POWER</p> <p>All Band</p> <p>K1KI 5,603,364 K1ZM/2 5,579,164 K5ZD/1 5,569,200 N2NT 5,019,948 K3ZO 4,959,360 N6BV/1 4,941,490 N2LT 4,892,272 K4VX/Ø 3,832,281 W2SC/1 3,784,710 KT3Y/4 3,695,880</p> <p>28 MHz</p> <p>K4XS 66,600 K7QQ 34,675 K5LZO 34,316 W3GN 31,233 AHØB/W5 11,501 W9GIL 9,331</p> <p>21 MHz</p> <p>K1ZZ 574,224</p>	<p><1RU 531,139 WZ3Q 406,512 N4CT 382,950 K8OQL 318,525 W6YA 310,453</p> <p>14 MHz</p> <p>KM1H 1,001,035 K2SS/1 801,534 KN6M/5 451,520 K9BGL 407,160 NQØI 321,328 WA8DXB 308,256</p> <p>7 MHz</p> <p>W1RR 706,660 K3WX 542,300 N6RO 505,938 WA4CTA 382,776 K4JPD 380,281 NW6N 341,348</p> <p>3.5 MHz</p> <p>W1MK 340,431</p>	<p>WE3C 218,163 W9LT/8 204,472 K4PI 192,384 N4CC/9 137,372 WA4PGM 105,462</p> <p>1.8 MHz</p> <p>W1BYH 48,552 WB9Z 46,314 W1CKA 36,992 KVØQ 28,161 K4TEA 27,115 W2FCR 19,610</p> <p>LOW POWER All Band</p> <p>K2ZJ 1,904,654 K2SG 1,845,006 KC1SJ 1,326,332 WS1E 1,085,750 KM1X 933,282 WA2SRQ 975,460 KX3Y 838,000 K5KLA 837,936</p>	<p>W6JTI 820,017 N5AW 725,642</p> <p>28 MHz</p> <p>KV8C 14,941 KQ1V 13,054 N6EE 11,041 WDØAVV 9,900 KB5JJB 7,803 KK4SM 7,446</p> <p>21 MHz</p> <p>N8II 324,144 N4MO 217,750 WB4TDH 208,925 W9HLY 144,493 N5M 124,344 WV5S 111,684</p> <p>14 MHz</p> <p>K9KU 231,768 KA7T 120,640 KB9S 118,560 W9JOO 76,035</p>	<p>KD5IA 65,988 WØR 60,770</p> <p>7 MHz</p> <p>N4IJ 127,020 K9MMS 58,206 KJØB 55,836 K9UIY 55,045 KO9Y 48,124 NI6G 47,124</p> <p>3.5 MHz</p> <p>W8WEJ 1,326</p> <p>1.8 MHz</p> <p>W2VO 11,832</p> <p>ASSISTED All Band</p> <p>K3WW 5,056,464 K1DG 4,560,150 K5NA/2 4,490,980 W2UP/3 4,007,604 W1PH 3,528,104</p>	<p>AA2DU/1 3,510,573 KC1F 3,147,934 K2WK 3,135,485 K2SX/1 2,845,845 NN3Q 2,430,792</p> <p>MULTI-OPERATOR SINGLE TRANSMITTER</p> <p>KC1XX 7,900,138 K1TR 7,311,372 K2WI 6,138,420 WD8LLD 4,334,180 KS9K 4,167,336 AG6D 3,274,992</p> <p>MULTI-OPERATOR MULTI-TRANSMITTER</p> <p>W3LPL 15,338,424 K1AR 15,020,460 N2RM 13,729,504 K3LR 12,919,728 KB9S 9,268,352 KY1H 8,812,000</p>
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BAND-BY-BAND BREAKDOWN—TOP ALL BAND SCORES

Number groups indicate: QSOs/Zones/Countries on each band

WORLD TOP SINGLE OPERATOR, ALL BAND

Station	160	80	40	20	15	10
EA9EA	214/15/52	1008/27/85	1504/28/82	1265/32/101	1922/31/99	570/25/80
P40W	280/16/42	734/2/65	843/28/86	1315/33/94	1411/34/109	1297/25/81
P40N	91/12/37	601/20/64	1427/29/90	1087/33/88	1773/33/103	1053/27/59
PY0F	55/12/22	254/19/55	1049/26/86	1193/31/100	2259/31/110	1126/25/87
T11C	271/14/42	852/27/78	1415/28/91	1266/35/82	1771/31/93	768/24/62
2D8Z	104/12/24	238/2/44	499/26/64	1199/33/97	2511/33/112	818/26/78
6V6U	36/8/19	316/17/53	1028/26/76	1481/34/107	1869/31/111	512/22/70
9Y4H	313/12/37	634/24/77	865/29/90	1157/31/88	998/26/82	989/20/49
HD9N	38/10/15	128/17/50	1075/27/84	730/34/92	2067/32/115	711/25/66
7Q700	5/4/4	68/15/28	530/23/65	824/31/90	2099/34/108	1104/27/93

USA TOP SINGLE OPERATOR, ALL BAND

Station	160	80	40	20	15	10
K1KI	210/13/61	375/23/64	789/33/125	848/30/110	596/38/95	59/20/48
K1ZM/2	141/20/65	587/24/68	666/31/108	733/35/110	690/29/96	43/16/30
K5ZD/1	111/13/53	340/21/77	604/32/111	940/33/104	772/29/102	60/18/37
N2NT	127/16/55	488/25/60	630/29/92	846/36/116	596/27/91	71/21/47
K3ZO	49/12/37	432/25/75	639/34/105	834/37/108	603/31/100	105/21/54
N6BV/1	118/13/40	413/13/60	780/27/98	852/35/110	859/28/92	42/13/30
N2LT	58/13/41	333/23/74	626/33/104	983/37/112	674/29/95	53/18/37
K4VX/0	72/13/42	29/25/77	482/35/114	496/37/111	647/32/105	73/19/41
W2SC/1	47/12/28	287/15/64	611/28/97	686/35/101	761/26/89	46/17/31
K13Y/4	75/14/41	30/18/70	734/29/97	635/33/97	435/28/82	76/18/43

WORLD MULTI-OPERATOR SINGLE TRANSMITTER

J6DX	85/11/34	611/22/77	1742/34/109	1429/32/108	1882/32/117	1431/26/87
4M5I	108/9/33	425/17/65	1551/33/105	1390/36/117	1716/31/106	861/21/49
VP9AD	263/12/30	526/2/77	2117/36/122	1295/34/111	1475/29/103	199/20/59
Z1ZWW	30/14/28	686/22/71	1768/30/102	1576/36/122	1590/31/96	1590/31/96
V31KF	139/11/25	496/21/73	1651/31/98	1363/33/118	1636/27/95	315/22/45
IQ4A	56/10/58	203/31/106	1515/37/132	1057/39/131	862/38/121	168/30/78

USA MULTI-OPERATOR SINGLE TRANSMITTER

KC1XX	73/19/68	695/26/103	931/37/139	855/37/132	741/33/126	86/24/74
K1TR	6/14/57	538/27/99	785/36/132	1058/36/134	891/33/121	75/25/70
K2WI	87/13/68	634/28/104	576/34/130	660/36/132	709/31/125	60/23/59
W0BLLD	65/18/53	204/27/88	462/34/126	791/35/128	529/31/116	63/24/60
K59K	47/14/41	202/30/91	690/37/127	636/37/126	520/31/110	46/17/41
AG6D	15/12/13	161/24/48	960/37/97	788/36/103	336/29/79	37/19/35

WORLD MULTI-OPERATOR MULTI-TRANSMITTER

EA9EO	685/13/61	1731/21/82	3013/36/142	2670/39/137	2305/38/140	645/30/96
AH0K	286/21/28	1/34/29/77	1901/36/120	2759/40/130	2268/38/120	1090/34/81
HG73JX	818/16/71	208/13/111	2119/36/143	2084/40/144	1381/38/126	291/29/73
W3LPL	180/20/68	1072/33/118	1702/36/152	1600/37/150	1245/34/132	358/25/81
K1AR	172/24/82	862/33/116	1568/36/150	1709/39/156	1140/36/134	172/27/82
9A1A	856/18/69	1690/33/106	2553/36/132	1549/39/128	1426/38/132	223/30/69

USA MULTI-OPERATOR MULTI-TRANSMITTER

W3LPL	180/20/68	1072/33/118	1702/36/152	1600/37/150	1245/34/132	358/25/81
K1AR	172/24/82	862/33/116	1568/36/150	1709/39/156	1140/36/134	172/27/82
N2RM	224/20/75	833/31/113	1635/38/148	1653/38/149	855/35/128	314/24/82
K3LR	183/22/72	751/34/111	1149/38/148	1566/38/154	1254/35/141	208/24/75
KY3N	131/17/65	602/29/104	1135/38/142	1242/38/142	675/30/121	174/24/74
KY1H	196/19/71	865/25/98	985/37/131	1350/38/139	743/31/122	130/24/65

become mesmerized by the computer screen. Sure packet is useful, but a good operator has worked 50% of the call outs already and just a few QSOs equals that J7 on 20. Who would have guessed who would be second? A US station? A European station? No, 4X/S59PR was a clear winner of the silver medal. Bob left 4X and was headed to 9X5 when the fighting broke out. Now he is back in S5-land.

Multi-Single

Operating in a straight north-south line, the teams of J6DX, 4M5I, and VP9AD went at each other antenna to amplifier. Everyone was watching to see who would emerge the winner. The group in the middle from the South-west Ohio DX Association came out on top. They took full advantage of 10 meters (check out the Band-By-Band Breakdown table). The guys from beautiful Bermuda were looking for any 10 meter QSOs. The 4M5I crew was also hurting on 10, but fought their way to second place in the world. The three stations are to be applauded for their outstanding efforts.

Over in Europe the top scores were scattered throughout zones 14 and 15. Operating from atop Monte Capra, the crew from IQ4A was the winner. Their shack is a cave built into the mountain. Besides their great enthusiasm for the CQ WW, maybe their advantage was that within 200 meters was a four-star restaurant! Remembering the visit of the Bavarian Contest Club in the SSB test, the fine crew of omnipresent UW2F pushed their keys to the second-place slot.

In the USA, KC1XX, no longer a K1EA clone but a viable life force in their own right, took top honors from second-place K1TR.

Multi-Multi

Operating in honor of EA9EO, the Grupo de Concursos de Ceuta put on quite a show. Taking top world honors is never easy in this



Always a welcome signal in the contest, TU2MA and his daughter pose for the camera.

category. Far out in the Pacific AH0K was putting together a crew of JA's to operate from the Diamond Hotel rooftop. They probably could not be more geographically separated, EA9EO and AH0K, but they both were driven by the same thing—the excitement of the CQ WW to construct winning stations.

Operating from several mountaintops, the two top scores in Europe, HG73DX and 9A1A, both did an outstanding job. Both of these stations' operating crews contain very dedicated, enthusiastic contesters.

The weather on the east coast was severe rain and wind the weekend of the contest. This affected all the operations in some way, from

QRN to lost elements to loss of commercial power. Mother Nature's actions were as important as the rarified regions of the atmosphere. When it all settled out, Frank's W3LPL team came out on top. Frank's station is located on rolling, grass-covered hills interspersed with islands of forest in central Maryland. His station was built by him and his crew and is a contesters' dream QTH. Second place went to the crew at K1AR using K1EA's QTH. N2RM's fine crew located in an intimate shack in the New Jersey pine barrens was all set to try for the top spot when that storm knocked out AC for four hours on Sunday morning.

Another fierce battle took place out in Col-

orado, where the new crop seems to be aluminum production. Fighting to a virtual dead heat were KØRF and AA6TT/Ø. With crews coming from all across the west US, both teams built the Colorado competition to a healthy level. In the end KØRF was declared the winner.

Even farther out west was the station of N6DX. Darrell's crew always shoots for top honors from the west coast. By the way, check out the 40 meter country totals for the USA multis (see the Band-By-Band Breakdown). Wow!

Team Contesting

It has been said before, but it bears repeating. We all should give a round of applause to the Southern California Contest Club. Each year they field two teams in this category. But they are not just any teams. These guys travel from the security of their homes to the far corners of the world to help their team and help all of us have a more interesting contest. Congratulations to SCCC Team #1 for a well-deserved victory.

Finishing second with a team from just one country and propagation area is tough. But that is what the Yankee Clipper Contest Club Captains accomplished. What a great job!

Clubs

If anybody wants to start a contest or DX club, they should definitely write a letter to the Frankford Radio Club to inquire as to how to set up the club and keep their members interested. The FRC has been a dominant force in all phases of contesting for 50 years, and they still are

going strong. Most observers of the results have no idea what planning and effort it takes to get over 345 and 256 million points for the FRC and Yankee Clipper Contest Club, respectively. I think that during the next sunspot cycle the FRC or YCCC will break one-half billion points!

The DX club scene is dominated by the country of Germany. Two of the most active European contest clubs are the Rhein-Ruhr DXA and the Bavarian Contest Club. They have a long tradition of excellence. This year's winner was the RRDXA with a score very close to the 100M mark. The third-place winner was from the new country of Slovenia. These guys are beyond enthusiastic. Congratulations to all the members of all the clubs listed in the club box.

Comments

As we prepare for the 1994 CQ WW DX Contests remind yourselves of several bookkeeping requirements. If you are low power or QRP you must follow rule XI.11, which says, "QRPP and low power stations must indicate same on their summary sheets and state the actual maximum power output used, with a signed declaration."

A reminder is also in order that for all categories, all transmitters and receivers must be located within a 500 meter diameter or within the property limits of the station licensee's address, whichever is greater. This does not mean that the property can be separate pieces of land scattered all over a country (or world). It means one piece of land located in one area.

All antennas used by the entrant must be physically connected by wires to the receivers and transmitters used by the entrant. The intent of this statement is to prevent distant receiving/transmitting sites. You cannot have a transmitter using the same call as the main station located somewhere other than the entrant's QTH. Of course, entrants in the multi categories can use information from packet, etc. As long ago as the 1960s the USA east coast multis were trying to use a west coast receiving site to hear JA's. What it demonstrated was that the distant receiving site heard stations calling the east coast station, but the signals were not audible to the main station!

On another topic, remember that all sent and received exchanges are to be logged. If you use CT, for example, there is no sent column in the log! On the summary sheet it says only "All reports sent were 59(9), unless otherwise indicated." This statement is okay, but add your zone to the end. The problem arises when it is not clear what the entrant's zone is. It saves us time if you put your zone number somewhere on the summary sheet.

About 60% of the logs we get are computerized. Please send a disk with your log. If you use CT, name the file your call.BIN. The files that we want are your .BIN, .CON, and BRK files. If you use N6TR, send us your .DAT file.

Believe it or not two of the top USA all-band scores could have been disqualified for not following rule XI. 6. This rule says, "Use a separate sheet for each band." Do not send your paper log as a continuous log. Use a separate log on each band. It makes it very, very difficult to analyze a log if the bands are all mixed together. On the disk do not send your .ALL



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file or .16C, .80, etc., as your only disk files. Send your .BIN or .DAT files.

Rule XI.9 states "All entrants are required to submit cross-check sheets (an alphabetical list of calls worked) for each band on which 200 or more QSOs were made." All other entrants are encouraged to submit cross-check sheets. This requirement becomes critical when we are looking to see if you worked a station. It takes seconds to check the cross-check sheet, but a long time if there is no sheet. Please follow the rules.

A reminder that you should avoid working stations below 7040 on SSB. Many stations cannot legally operate below 7040. Do not encourage them to make a quick QSO at 7030.

Now for some interesting facts. The average number of hours of operation for the top scores in several categories was: World All Band 42 hours (range = 47.8-39), for low power it was 34 hours (range = 41.5-28); for USA All Band 39.5 hours (range = 39.5-33), or assisted 39 hours (range = 41-33). Of course everyone who enters the contest operates as long as he or she can. The single-band categories are a way of putting in less hours while still trying to be competitive.

Here are some statistics about logs received during the 1993 CW CQ WW. Total 2638 logs: High Power (36.5%), Low Power (34.9%), Assisted (9.2%), Multi-Single (6.6%), Check Logs (6.6%), QRP (4.6%), Multi-Multi (1.6%).

Congratulations to Lucien, F8TM, for entering the contest as many of his 86 years as possible. And congratulations to entrants in the new under-18 trophy category: BV/KC6CNV, BV/KK6BB, JM2RUV, UB4EYT, and YL2GVW. This year we raised the age limit to 21 and younger. Remember to write your age on the cover sheet if you enter this category.

Finally, let's look at unique rate (see the table). Let's make the assumption that uniques equals broken call. Of course not all uniques are miscopied/sent calls, but it is our experience that over 90% are really copying/transmitting errors. What are some reasons for your unique rate? (1) When your rate goes up maybe you make more mistakes, thereby creating more uniques. (2) You are multi; perhaps you can locate where operator changes took place—more uniques. (3) You are located in a propagat onally unique location; for example, YV, HK stations on 40 during the day at PJ1B or VK/ZL's at VK9LI, or UA9 stations from a UN7 on 160. You can probably think of more reasons. If you do, let us know. I guess over the years almost everyone has heard of uniques.

Well, here is an excerpt from our log-checking output for the CW contest: 1993 CQ WW CW 393 station logs, 643034 QSOs, 48788 calls, 19344 common, 29444 unique. What this means is:

393 station logs—393 disks were used to create the CW master data base;

643,034 QSOs—the 393 disks contained this many QSOs;

48,788 calls—the total number of different calls in master data base which can be broken down into 19,344 common (39.6%)—more than 1 person worked the call; 29,444 unique (60.3%)—only 1 person has that call in the log.

Thanks

Thanks to the members of the CQ WW Contest Committee for their dedication to making the

AVERAGE % OF STATIONS WORKED ON EACH CONTINENT*

		AF	AS	EU	NA	OC	SA
USA	1.	3.1	4.7	74.8	10.9	1.4	4.4
	2.	2.5	5.9	74.8	5.8	1.8	4.4
	3.	3.6	4.2	65.5	15.7	2.3	8.6
	4.	5.1	5.3	53.0	22.1	2.9	11.1
	5.	5.2	16.7	36.2	24.7	4.0	12.2
	6.	3.3	50.0	12.1	21.0	5.5	8.6
	7.	3.1	41.5	20.4	21.5	4.9	8.7
	8.	4.7	7.0	54.4	20.9	2.9	10.8
	9.	3.3	10.8	52.9	20.5	3.7	8.9
	10.	7.9	19.0	28.5	29.3	3.9	11.4
EUROPE							
Zone 14							
South		35.8	1.6	44.3	7.2	1.5	0.5
North		33.3	2.5	55.4	6.9	1.4	0.3
Zone 15							
South		30.5	2.0	59.2	5.9	1.7	0.5
North		34.1	1.0	51.6	11.9	0.9	0.5
JAPAN							
		0.9	10.4	27.0	53.0	5.3	2.7

*Each number is the average of the top 10 disks from that area.

USA HIGH POWER ALL BAND TOP TEN 5-Ø CALL AREAS

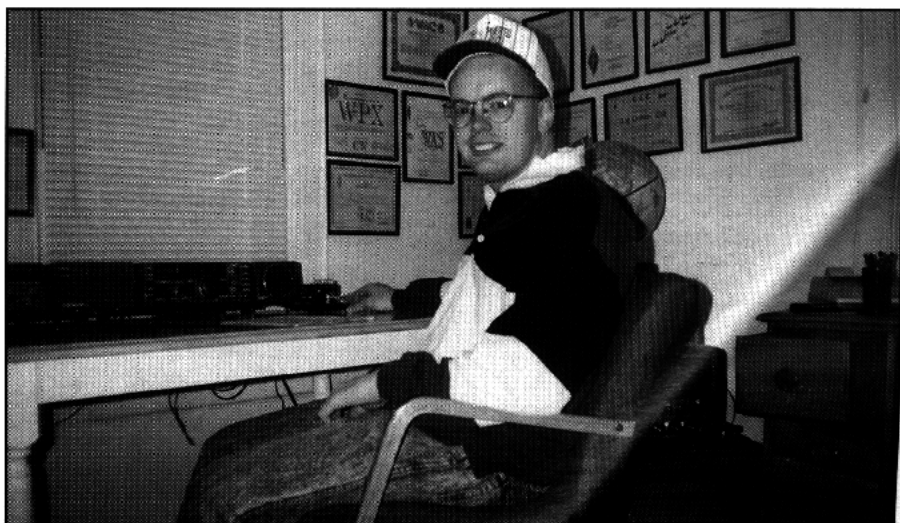
K4VX/Ø	3,840,165
K5GN	3,519,425
N5RZ	3,069,627
K8GL	2,869,867
W9RE	2,854,551
K5MR	2,550,274
W6EN	2,452,719
NN7L	1,773,550
K4XU/9	1,619,622
K9MA	1,544,358

USA LOW POWER ALL BAND TOP TEN 5-Ø CALL AREAS

K5KLA	837,936
W6JTI	820,017
N5AW	725,642
K9QVB	687,420
WD5K	584,775
KZ6E/Ø	564,465
WU8A	452,184
K5DX	443,156
WAØRJY/7	372,354
K9MK/5	362,595

TEAM CONTESTING

- Southern California Contest Club Team #1:** 45,194,836. By ZD8Z (N6TJ), 9Y4H (K6NA), PYØF (CT1BOH), HD9N (WN4KKN), T11C (N6TR).
- YCCC Captains:** 23,123,773. By K5ZD, N6BV, W2SC, K1KI, W1WEF.
- Southern California Contest Club Team #2:** 17,715,234. By 7Q7OO (N6AA), 4S7/N6ZZ, PZ5JR (AB6NJ), XE1/AA6RX, ED6XXX (N6RA).
- Salt City DX Contest Team:** 2,173,348. By K2ZJ, AA2PQ, NA2Q.
- Black Hole Contesting Conspiracy:** 1,203,840. By XM4VV.



Entering the low power category can be a lot of fun, as KA4IKH demonstrates.

USA CLUB SCORES

Frankford Radio Club	356,679,629
Yankee Clipper Contest Club	245,281,206
Southern California Contest Club	79,024,747
Potomac Valley Radio Club	76,424,748
Northern California Contest Club	73,917,616
North Texas Contest Club	69,349,589
SE DX Club	47,713,285
North Coast Contesters	43,596,978
Mad River Contest Club	32,028,613
Society of Mid-west Contesters	30,534,591
North Florida DX Association	24,032,168
Northern Alabama DX Club	18,030,883
SW Ohio DX Association	16,938,033
Southern California DX Club	16,463,595
Mile High DX Association	15,708,013
Texas DX Society	15,592,555
Western Washington DX Club	15,422,788
Kentucky Contest Group	14,861,537
Minnesota Wireless	11,188,205
Salt City	10,440,466
Rochester DX Association	8,677,704
Oklahoma DX Association	8,164,848
Central Virginia Contest Club	7,765,501
Western Florida DX Ring	7,610,350
Kansas City DX Club	7,578,754
Eastern Iowa DX Association	7,420,777
Hoosier Contesters	7,044,110
Order Boiled Owls	5,766,995
South Florida DX Association	5,490,566
Western New York DX Association	5,308,007
San Diego DX Club	4,522,718
Northern Ohio DX Association	3,748,569
Grand Mesa	3,384,007
Eastern TN DX Association	3,181,972
Long Island DX Association	3,150,478
Mississippi Valley DX Contest Club	2,883,223
Four Lakes ARA	2,563,912
Lone Star DX Association	2,479,994
Central Arizona DX Association	1,880,635
Northern New Jersey DX Association	1,823,209
Carolina DX Association	1,778,072
Fox Cities ARA	1,683,333
Wisconsin-Illinois ARC	1,633,166
Ocean Montauk	1,435,937
Shasta RC	1,396,246
Murphy's Marauders	1,355,365
Albany ARA	1,246,108
Blackhawk DX Club	1,167,759
Amarillo DX Society	1,144,897
SE MI DX Association	1,142,126
South Jersey RA	1,115,256
Arrowhead	836,968
Left Coast Contest Club	834,508
Northern Shenandoah RC	814,420
River City Contesters	810,866
Dauberville (W3)	685,161
Northern California DX Club	527,932
Amer Rec Cross	302,939
Great South Bay	259,899
Wichita ARC	252,050
Sterling Park ARA	215,133
West Park RC	204,444
Red Wood Empire RC	110,344
WY DX Contest Club	8,560

DX CLUB SCORES

Rhein-Ruhr DXA	97,403,030
Bavarian Contest Club	75,443,141
Slovenia Contest Club	41,764,984
LNDX (F)	36,995,008
Hungarian DX Club	35,837,994
Croatian DX Club	32,945,194
Chiltern DX Club (G)	29,415,917
Monte Capra Radio Club (I)	20,503,965
Kiwi Contest Group	18,593,566
Kaunas Univ Tech Radio Club	17,837,416
Araucaria DXC (PY)	16,860,185
Ukrainian Contest Club	16,807,446
Alaska DXA	15,145,758
Taganrog Contest Club (UA6)	14,758,382
Delta Mike Contest Club (I)	13,994,258
OH-DX-Ring	13,378,688
Oudemaas Contest Group (PA)	12,269,262
Alpha Fox (OH)	9,772,306
Brescia DX Group (I)	9,140,142
Vjvodina Contest Club (YU)	9,094,492
Eastern Canada DX Association	6,214,780
YV Dxperts	4,956,250
Top of Europe Contesters (SM)	4,526,183
Japan Crazy Contesters	4,504,822
Bavarian DX Group	4,428,378
Regina ARA	4,267,080
Kiel Canal Contest Club	4,051,582
Moscow Radio Club	3,947,152
Danish DX Group	3,898,582
LYNX (EA)	3,882,140
Fraser Valley Contest Club	3,716,734
SP DXC	3,699,834
Noviomagnum (PA)	3,478,725
BC DX Club (VE7)	2,662,079
ARARM (XE)	2,490,174
Tupy DX Group (PY)	2,482,590
Radio Team Finland	2,393,744
Cordoba Radio Club	2,332,893
Santa Catarina (PY)	2,109,194
South German DX Group	2,054,680
Irkutsk Radio Club	1,874,845
OH3NE	1,625,033
Calgary ARA	1,412,706
LA DX Group	1,386,616
SP Contest Club	1,169,924
Sevilla Contest Club	1,159,833
Maui ARC	1,145,290
Marianas AR Club	776,325
Perugia Contest Club (I)	744,441
Zlin Contest Club (OK)	703,050
Santa Barbara Contest Club (I)	622,817
Fairs Europe (UB)	616,630
Fox Contest Club (YU)	501,087
OM3KUN	346,018
Western Siberia DXC	305,792
URVO (EA)	299,061
Domazale (S5)	188,970
Czech Contest Club	122,921
Latvian ARA	119,044
Tallinn Radio Club	39,036
SP QRP Club	17,492

contest fun and a fairly judged event. The hard working log checkers are K1DG, K3EST, K6NA, KR2Q, KR0Y, N3ED, N6AW, W2RQ, W3ZZ, W7EJ, and WA8YVR. A big thank you to N6TR, who created the ever-changing software used to check the logs, and to the keeper of the data bank and all around advisor, N6AA.

Special US gurus who we lean on more than once a contest season are K3ZO and N2AA. Special DX advisors who help us keep an international point of view are CT1BOH, DL6RAI, G3SXW, I2UIY, JE1CKA, OH2BH, OH2KI, OH2MM, OK2FD, PY5EG, SM3SGP, UA9BA, and S50A. Thanks to K1AR for our great trophy program and certificates.

Finally, thanks to Mike, W9RE, who over the years has put a lot of time in checking logs. Business calls him at this time. We hope to have his talents back again soon.

Congratulations to all the entrants and winners. CU in 1994!

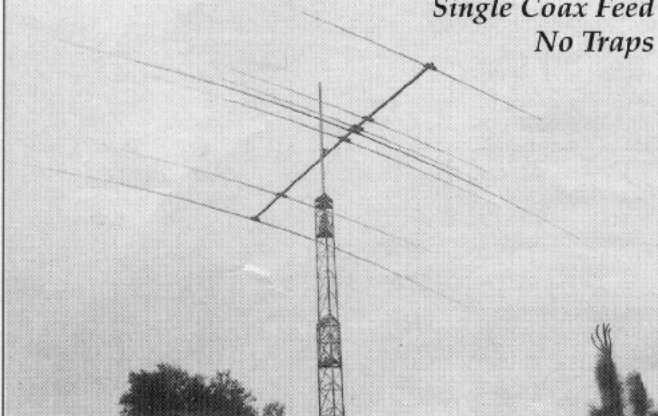
73, Bob, K3EST

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CIRCLE 92 ON READER SERVICE CARD

DX QRM

We suffered a lot from flu and having no beam on 40 meters. But most of all we learned a lot and we'll be back again after some antenna work! . . . OH6NIO. This is the first time that I work QRP in the CQ WW DX Contest. I did enjoy it very much and I was really surprised that I could make 5 QSOs with the US on 80 meters and some other interesting DX QSOs on 80 and 40 meters with 5 watts only. It is very difficult and often impossible to work rare multipliers with 5 watts because of big pileups caused by packet cluster announcement. With some Russian prefixes I had problems to find out the appropriate DXCC country . . . DK5WL. It's nice to work QRP, but the next time I'll prefer the kilowatt . . . DL6RDR.

Thanks for running the contest; enjoyed it although the band conditions are deteriorating for QRP DX. Could not get into Oceania, Central America, or Alaska, even though I could copy the stations . . . GM4HQF. With my QRP station I preferred to work in quality/multipliers and not in quantity! . . . ISØLYN. The max output power used in the contest was 4.8 watts (measured by Daiwa NS-660 PWR Meter) . . . JA1YNE. Tower still cranked down from storm, rain water in TH3-traps, what can you do? Just have fun for a few minutes! . . . DJ2HH. The polar cap absorption wiped out the band on the first day. Almost no Europe or Japan. Otherwise it was fun . . . VE6JY (Opr. VE6WQ).

Dream come true: a contest where I was operating from a house far away from crowds with almost 2000 square meters of yard. A lot of QSOs and no neighbors TVI? . . . YV3AJ. My first CQ WW contest on CW more than 20 years only on phone! I cannot yet compete with the skilled operators for top positions and you may find some wrong calls due to copying difficulties (between D and B, S and H, Hi!). Very good conditions with Stateside, but I am not satisfied with the number of multipliers. It is interesting to compare this log with my "phone contest log" and see how CNDX changed! . . . IV3PRK.

It was for me a weekend packed with interruptions, work, and other distractions that threw my hopes of a good score away. Also the bands were very noisy, at least here at my QTH. Had a great time in the contest and thanks to all who took the time to work me under the least desirable conditions. Nice to see most of my friends again on the air. TNX for the great time and 73 . . . WP4IIV. This contest was the best ever. It is sure lot of fun ever for small pistol like me! . . . VE2GHI. It was very pleasant contest, but not propagation in my side. I am 17 years old . . . LZ3HI. Quite amazed at the high-speed operations. It is nice to have met many old timers during the contest. Poor propagation . . . BV2A.

Oh no! Terrible band conditions. And it's going to get worse. Too bad we can't replace the sunspots with dirty sunglasses . . . OH2BC (OH6EI). I am ham since only September 1992. It was my second contest and happy to make more than 1000 QSOs. I am 21 years old . . . F5TFS. Fell asleep at operating position the last 6 hours of contest. Woke up 15 minutes after contest was over. Performance below expectation but will be back again next year to better this year's score. Thank you all the stations from Japan for the points. If only 5000 of the licensed hams from Japan are able to QRV in every contest, it would make many contesters happy, especially those outside the Asian continent. Thank you CQ magazine for the fine contest . . . 9M6HF.

I am a new amateur bitten by the contest bug. Look forward very eagerly to be taking part in many contest. The rules of CQ contest are very simple and easy to understand and observe . . . VE3DSN. After several years on 28 MHz in CQ WW DX Contest, attending low power class on 3.5 is a challenge! . . . OH3TY. One of the fun contests where a small pistol (90 watts G5RV/dipole & Zepp) can fire some effective bullets! (Zone 29 helps of course!) . . . VK6HG. The VF1L callsign marks the 235th anniversary of the final destruction of the fortress of Louisbourg by the English conquerors. Today the Fortress has been one-third restored and is a major attraction for visitors from around the world to Cape Breton Island. The call is terrific on CW! . . . VF1L (VE1AL).

Another of these wonderful times when my high terrain QTH prevents any paths to South America or Africa. Normally, can usually find an Antipodal path to LU, but never heard any from that area . . . HL9UH. Three days myself in mountain valley, don't talk with people, but 937 hours on amateur radio—beautiful contest . . . OL1CW. I put up dipole on Friday, repaired it on Saturday, neighbors cut it down on Sunday! . . . IK2AIT. During the contest we did not have electricity in Sarajevo, so I worked off a 12 volt battery . . . T97T. Amazing long path 10 meters operating at 1230Z Sunday yielded zones 4, 5, 8, and 9 . . . VS6WO.

USA QRM

We did our best, but K1AR beat us anyway. But it wasn't bad showing

ZONE LEADERS SINGLE OPERATOR

Zone	Call	Score	Zone	Call	Score
1	AL7CQ	409,812	21	9K2ZZ	5,014,159
2	VO2AC	97,510	22	4S7/N6ZZ	4,575,420
3	W6EEN	2,315,619	23	JT1BH	302,771
4	K4VX/Ø	3,832,281	24	BV2A	101,640
5	K1KI	5,603,364	25	JH5FXP	2,655,594
6	XE1/AA6RX	3,758,225	26	XU7VK	501,650
7	TI1C	9,123,817	27	DU3HF	140,742
8	VP5RX	5,205,519	28	9M6HF	1,258,104
9	P4ØW	11,139,948	29	VK6HG	282,240
10	HD9N	7,915,320	30	VK2AYD	652,795
11	PYØF	10,591,744	31	NH6T	2,461,536
12	XR1X	1,302,525	32	ZL7FD	432,200
13	CV5A	940,532	33	EA8EA	12,703,752
14	ZB2X	6,129,904	34	No Entry	
15	4O7AV	3,784,480	35	6V6U	8,949,808
16	EO5U	2,098,759	36	ZD8Z	9,086,940
17	UN7LZ	1,382,256	37	7Q7OO	7,173,846
18	RWØAB	1,005,975	38	ZS6EZ	6,924,175
19	UAØZDA	355,040	39	No Entry	
20	JY8VJ	7,164,512	40	JW8XM	384,354

for two old guys! About 42 hours of operating time each. Not the preferred way to run a multi-multi, but we couldn't be competitive with only two ops in the multi-single category, so we just turned it loose and did our best! . . . N3RS. Stateside stop calling "CQ" all the time! One "W1" was calling "CQ" on top of a JW on 40 CW! . . . W3SOH. Heard very few JA's. The bands were in great shape, but I tuckered out before they did . . . NJ9Z. Although I operate 90% CW, this was my first serious effort in the CQ WW CW Contest. Not a single European or Japanese station heard here in the black hole on 10 meters. It's hard to believe I'll have to wait until the next century before 10 meter QSOs become a significant part of my total score again. I think I should just move to the Caribbean! . . . KØØZR.

Lost part of Saturday AM with blown up antenna switch on 14 MHz, and struggled with RF in computers all weekend. A major station rebuild is in order. We'll be back again next year! . . . K8CC. Never could generate a decent run, so I was reduced to seeing how quickly I could break through pileups! . . . WA6CTA. Damn! TVI in shack and I missed the winning field goal in the Giant's game! (US—football). But worked a new multiplier. Bittersweet success. Hi, Hi! . . . WR2G. Too many poor fist! CW weighing vry poor! Too many transmitters and not enough receivers. Life's too short for QRP . . . NØAFV. Well, 10, 15 was not too good here for me, and then I was battling a rain storm that left me with no power and also heavy winds. Had to cut the contest short . . . NP2Q.

With 5 watts it's Search & Pounce all the way. I very quickly discarded any notion of calling "CQ" and running stations! . . . W6ZH. Nicest way to pick up 12 new countries on 80 toward 5BDXCC . . . AA1M. I really enjoy the CW version of this contest much better than the Phone—more of a challenge. It's absolutely amazing. Not that many years ago a 100k score would have been significant for single band 80 meters. Now I doubt it even gets mentioned. I find it very difficult to commit to the number of hours and techniques that are needed to produce a really winning score and probably never will. I'm still working split, rarely run them, don't use computer, don't use a logger, don't listen to the packet DX cluster, still use my 1948 (75A4) receiver, and you know what? Thoroughly enjoy digging them out by myself . . . K2RR/1.

Everything broke down except the computer! . . . N2UN. After the first 24 hours, the transformer in the linear went out, so I swapped it out for a linear I built when I was 15 years old (over 16 years ago) and which had not been used (not even plugged in) for over 10 years. The Heathkit SB-200 worked very well . . . N6JKQ. Lost entire Saturday morning EU run with antenna frozen pointing south due to overnight sleet! . . . W8FN. Ten meters was lousy, but 80 and 160 were spectacular on Saturday night—Europeans all over the place, coming in as loud or louder than most of the east coast USA stations. For once I thought I'd finally come out of the "Black hole" . . . NSØB. Great contest; even snagged a new one. Biggest problem: Stations that only sign every 10 minutes! . . . W7QDM.

Great contest! I couldn't believe I was working eastern Europe on 40 meters with only a vertical; then I QSYed to 80 and heard ON4UN calling CQ and worked him on first try! Fantastic conditions, good antennas on the other end! . . . W6RCL. Thirty-one hours of operation. I was told it could be done, I was shown it could be done, I proved to myself



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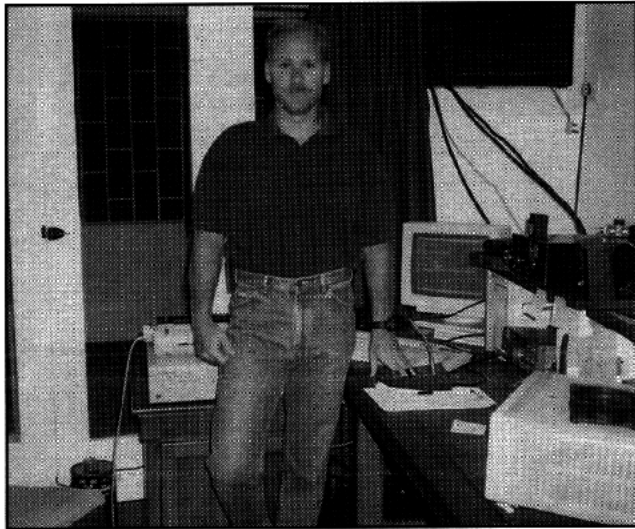
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CIRCLE 15 ON READER SERVICE CARD



The voice and key behind C91J is John, WA4WKY.



Tom, YL2PP, passes his best to all "boys and gals" who like the CQ WW DX Contest.

that it could be done, and I did it myself. . . . KY2T. Wow, Murphy visited me big time for this test. Loss of power, antennas, rigs, and switches just about put me out of business (and green stamps). I thought I had everything ready for the contest, but Murphy definitely had everything ready for me. . . . K8FC/2.

Great weekend. Got the Quad up before the cold front hit Texas on Thanksgiving. First time I've had a directional antenna. What A Hoot! Made up for poor 10 meter openings with a good evening on 15. Now if I could just learn to copy the 40 wpm from the computer crowd. . . . N5XUS. What a blast! Swarming pileups, even with low-power here, made for some hot times. Low bands especially good on Saturday night, even from the middle of the Pacific (plus Thanksgiving turkey on the beach! Ahhh.) . . . NH6T. When will the current "bear market" in the solar cycle end? . . . K7FEF.

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DJ8WL, **DJ9CB**, **DL80BC**, **T94DX**. **DK0TZ:** **DF5EN**, **DL1S8F**.

DL0SS: **DI** 1FF0, **DI** 1FFD, **DK7FP**, **DL9XY**. **DL0TUD:** **DL6UEG**, **DL8DYL**, **DL8WOW**. **DL0WU:** **DF5JB**, **DF7YE**, **D45UT**, **DJ8UV**, **DK5EZ**, **DL4CAE**. **DX1HB:** **J1KJK**, **J1WLN**, **JR1NH**, **JK1CX**. **DX3H:** **4F3AA**, **4F3C**, **DU3BRA**, **DJ3CWC**, **DJ3FBB**, **DY3CWI**, **DY3CWD**, **DY3CWD**. **ED3KU:** **EA3AIR**, **EA3AVV**, **EA3DU**, **EA3FER**, **EA3KU**, **EA3QH**. **E17M:** **E3DP**, **E4BZ**, **E6BT**, **E15HB**, **E16GF**. **ER7Z:** **ER5AA**, **ER5AL**. **F5KBJ:** **F6BQY**, **F6IE**, **F6HBR**, **F6AXX**, **F5LDY**, **F5JY**, **F50BK**, **F50TZ**, **F5PHW**, **F5JNT**, **F5HEW**, **F5IBZ**, **F8VQ**, **F4IRPW**. **FH/OL5XU** & **DL9AW:** **FJ/F8UFT:** **F6D8X**, **YL76DY**, **F6HWU**. **FY0EK:** **FY5GB**, **FY5FO**, **FY5GJ**, **FY5CG**, **FY5FY**. **G8FOS:** **G8CLY**, **G8LLJ**. **G3LNS** & **G3NKC**, **G3VHB**, **G4UGJ**. **G3PJT** & **G3PMR**. **G4BLX** & **G4K7D**. **G85DX:** **G3N0H**, **G30UF**, **G3RTE**, **G3VRY**, **G4DXJ**, **G4KXS**, **G4XRV**, **N21W**. **W65Z**. **G85WV:** **G4MVA**, **G8LII**, **G8NUP**, **G8NXX**.

GS4TMS: **G4MUYE**, **G80KAE**, **G4MDGT**, **G4M2TY**, **G4M4XP**, **G4M8KW**. **GX0FUN:** **G4WJS**, **G4WVX**, **G4DOW**. **HA3KHC:** **Lovaly**, **Robert**, **Tibor**, **Balazs**. **HA3KNA:** **HA3OU**, **HA3OV**, **HA3VS**, **HA3VU**. **H6GY:** **HA7PO**, **HAG6B**, **HAG6X**, **HAG6N**, **HAG6B**, **HA60I**, **HA60O**, **HA60Y**. **HS0AC:** **HS0G3NOM**, **HS0ZBI**, **J43KWX**, **K1XK**, **KQ1F**. **HZ1AB:** **A35ML**, **KM4E**, **N4KT**, **SM8CXU**, **W7SE**. **I11D:** **I1EAZ**, **K10UK**, **K1QAC**, **K1AUS**, **K1LBO**, **K1LZE**, **K1VBE**, **K1TZO**, **K1TXH**, **I1JZV**. **I6I:** **IK6GZM**, **IK6RSV**, **IK6CXI**, **IK6FFI**, **IK6JW**, **IK6JBA**, **IK6ML**, **Mauro**. **I02L:** **IK2QEI**, **IK2PFL**, **IK2JUB**, **IK2GWH**. **I04A:** **IV4EQ**, **IL4CK**, **IL4NC**, **IE4T**, **IA4KW**, **IA4TJE**, **I4PVP**, **IK2VCI**, **IK4DCT**, **IK4DKO**, **IK4DWR**, **IK4DZ**, **IK4QJH**. **IR0A:** **IK80DB**, **IK81HW**. **IR2W:** **IXPQ**, **I2EOW**, **I2VXY**, **IK2CFH**, **IK2EGL**, **IK2VJF**. **IR2X:** **IU4AE**, **IK2YSE**, **IK2MOV**, **IK2QMU**, **IK2GNW**, **IK2IQY**, **IK2MRZ**, **IK2DOT**, **IK1PMR**.

IUXZ: **IK2GSN**, **IK2GZU**, **IK2WAD**, **IK2FYH**, **IK2GXX**, **IK2SAU**, **IK2JTU**, **I2QIL**. **J6DX:** **K3BQL**, **N9AG**, **W80K**, **W8QID**, **WB8ENR**, **WB8XK**. **JAZYKA:** **JK1GRI**, **JK2CKY**, **JK2SUO**, **J4RDO**. **JABYCL:** **JF4CZL**, **J5EKC**, **J6JWUW**, **J6K6P**, **J6MYYW**. **JABYBY:** **JE8TNI**, **JG8NFE**, **JG8NID**, **J8UCI**, **J8RCKS**, **J01DFG**, **J01DFG**, **J01DFG**, **J01DFG**, **JRDHA**, **J8BWS**. **JG2YIV:** **JF2WQO**, **JF2PCY**. **JH5ZCP:** **JAS4UC**, **JH5PHC**, **JR5JAO**, **JR5MYC**. **JH5ZJS:** **JAS5JC**, **JAS5CJ**, **JAS5FJ**, **JAS5CJ**, **JAS5HU**. **JJ3YBB:** **J43FHL**, **J43LH**, **J43PJL**, **J43TJA**, **J43CIG**, **J43FCS**, **J43RQF**, **J43ERV**. **JM1ZTI:** **J47FYF**, **JR1SDF**, **J46AKL**. **K1TR** & **41FWE**, **K1JKS**, **K1MNS**, **NW1U**, **NX**. **H. K2QMF** & **A42FB**. **K2WI** & **N2NU**. **W2RH**, **W09S**, **W02Y**. **K3CP** & **K3YD**, **KU3K**, **KU3X**. **K3DI** & **W44EH**. **K4IUV** & **AK4Z**. **K4LTA** & **N1CWR**, **W4TYU**, **W44TKR**, **KY4**, **KC4URW**, **AD4LG**, **AC4EM**. **K5HXK** & **NV5L**. **K6HRT:** **Club**. **K6XT** & **N6AYW**.

K7HYA3: & **WB3FYU**, **K43WT**. **K8LX** & **N8EA**. **WA2DT**. **K9UWA** & **K49A**, **K9SI**, **K9R9**, **N9VQ**, **W9FC**. **KA9P** & **WB9CEJ**. **KB2HZ** & **KU2C**. **KC1XX** & **AD1C**. **KM3**. **K7RG** & **4S7O**. **K90K** & **K49FX**, **N9AW**, **N9B3**, **N9BC**, **W19V**. **LA1DXG** & **LA2KD**, **LA4DCA**, **LASMT**, **L4GMP**, **L47AF**. **L03A:** **LU6DEG**, **LU6EF**. **LX/DF0BK:** **DL8SCG**, **DL4SDX**, **DL5SEJ**, **DL4SDW**. **L26S:** **Club**. **L29A** **L2ZBE**, **L2ZCC**, **L2ZDF**, **L2ZHE**, **L2ZJI**, **L2ZJE**, **L2ZPO**, **L2ZUJ**, **L2ZXA**, **L2Z-E**, **Y7G**, **Ily**. **N2MM** & **W82R**, **WN3K**. **N3BNA** & **NM2Y**, **KU3CN**, **NB3I**. **N50K** & **N5CG**, **W08RY**. **N6CQ3** & **K35WZ**, **NY3Z**, **WD3U**, **WF3T**. **N6YKL** & **W7CB**. **NC0P** & **N4JL**. **N8SM**, **W40FLS**, **W08GY**, **W08V**. **NE3F** & **N23V**. **NN3L**. **NM3K** & **N3HTZ**. **OE1XTU:** **4N4JU**, **OE10PW**. **OH18V** & **OH1VL**. **OH2AF:** **OH2RPR**, **OH2PRJ**, **OH2PC**, **OH2Z**. **OH1JT**, **OH2W**, **OH2JA**, **OH2BAF**, **OH6CT**, **OH6DD**, **OH6OS**.

OH3AT: **OH3FS**, **OH3DC**, **OH3NBJ**. **OH3NE:** **OH3FM**, **OH3LQ**, **OH3MCP**, **OH3MYD**, **OH3VLP**. **OH6NIO** & **OH6MFN**, **OH6MMC**, **OH6NEX**. **O15AY:** **OH5PZ**, **OH5LAQ**, **OH5LLR**. **OK10KE:** **OK1DUU**, **OK1VBA**, **OK1FUT**, **OK1HPW**. **OK2KDS:** **OK2VWB**, **OK2HU**, **OK2-2266**. **OK2KJU:** **OK2BXU**, **OK2BXL**, **OK2BUX**, **OK2PTD**, **OK2PWJ**, **OK2P3W**. **OK2KDD:** **OK2BD**, **OK2BGR**, **OK2BNX**, **OK2PID**. **OK5W:** **OK1AEZ**, **OK1CF**, **OK1JJB**, **OK1TWT**, **OK1JKT**, **OK1PN**. **OM3KFF:** **OM3TFG**, **OM3TRG**, **OM3TLL**, **OM3TCW**, **OM3TPW**, **OM3CZQ**. **OM3RJB:** **OM3CSQ**, **OM3COU**, **OM3CKW**, **OM3CPG**, **OM3TCL**. **OM3RKA:** **OM3TDP**, **OM3YX**, **OM3COR**, **OM3CPC**, **OM3THR**, **OM3RTZ**. **OM3R0S:** **OM3COU**, **OM3K3**, **OM32815**. **ON6AH** & **ON4SO**. **ON50D**, **ON6QR**, **ON6VL**, **ON6DM**, **ON7PC**, **ON7ZY**, **ON9CMB**. **PA3FNE** & **PA3LYZ**. **PI4CC:** **PA3BSQ**, **PA3EPD**, **PB0AU**. **PI4TUE:** **PA3GBU**, **PA3GIP**, **PA3DUU**, **PA0ERA**, **PA3FCD**, **PA3DQW**, **PE1NEX**. **PI4ZLD:** **PA3GCU**, **PA3EOB**, **CF6JC**.

RB4LWM: **Dmitry**, **Yuri**, **Maxim**. **RS3A:** **RA3DUU**, **UA3-170-79**, **UA3-170-126**, **UV3AEV**, **UZ3AXX**. **RW1A:** **UA1A0F**, **UA1-169-2391**, **UA1-169-1306**. **S55AA:** **S53EM**, **S53EO**, **S53VV**, **S53WW**, **S55AA**, **S53MM**, **S59K**. **SM3R0D:** **SM3CER**, **SM3DMP**. **SK5AA:** **SM5ACQ**, **SM5FUG**, **SM5LNE**. **SK6AW:** **SM6CAS**, **SM6CDG**, **SM6CVE**, **SM6DED**, **SM6DER**, **SM6EY**, **SM6ERS**, **SM6GBM**, **SM6GHC**, **SM6QD**, **SM6LJF**, **SM6SHF**. **SK6QW:** **SM6JJK**, **SM6SKU**, **SM6TZR**, **SM6VAJ**. **SK7BQ:** **SM7BHM**, **SM7TY**. **SK7JD:** **SM7HQD**, **SM7SRC**, **SM5CTH**, **SM2EZW**. **SK30SM** & **SM3SGP**. **SM3RKP:** **SP3GXU**, **SP3SPN**. **SP9AKA:** **SP9LAS**, **SP9HVV**, **SP9JZT**, **SP9LAF**. **SP9KRT:** **SP9-1753**, **SP9HMR**. **SP9PFD:** **SP9CTT**, **SP9FIH**, **SP9MQE**, **SP9TCE**, **SP9TGV**, **SP9UOG**, **SP9-1573-KA**. **TM9C:** **F51E**, **F50F**, **F5LGE**, **F6ARC**, **F6DZS**, **F6IWW**. **UT7W:** **U5-W-7**, **UB5WCX**, **UB5WEY**.

UV2F: **RA2FA**, **UA2FC**, **UA2FF**, **UA2FJ**, **UA2FM**, **UA2FX**, **UA2FZ**, **UA2-125-767**. **UZ0QWA:** **UA0QDL**, **UA0QN**, **UA0QAU**. **UZ4AZJ:** **RA4AV**, **UA4AFM**, **UA4AGD**. **UZ4VWA:** **UA4WA**, **RW4WA**, **UA4W4A**, **UA4WAN**. **UZ4WVB:** **L44WHW**, **UA4WGU**. **Alex**. **UZ9AWN:** **Club**. **V31KF:** **K5GA**, **K5WA**, **K13L**, **N5DU**, **W5ASP**. **VE6AO:** **VE6KZ**, **VE6AMR**, **VE6NAO**, **VE6CIZ**, **VE6CGY**, **VE6KCT**, **VE6IC**, **VE6DMO**, **VE6RAJ**, **VE6RC**. **VP9AD:** **K13V**, **N3AD**, **N3RD**. **VP9MJ:** & **W12YOH/VP9**, **KP2NMV/VP9**, **VE3YBH/VP9**, **WA2A0G/VP9**, **WB2ABD/VP9**. **W0KEA** & **W0KR**, **W1XE**, **W8UO**. **W1BK** & **W1U4UR**. **W3GG** & **W03I**. **W4PRO:** **K4IX**, **WB4DNL**, **W4DZH**, **K16ZH**, **W4HIR**, **W4WRP**, **WB4GCS**, **K4P2N**, **K08R**. **W6BA** & **N6AW**, **N6NU**, **K7JYE**, **W6HAL**. **W6REC** & **W6BH**. **KN6SO**. **W8BI:** **N08C**, **N8DIX**. **W9K0Q** & **K9BG**, **K9RN**, **K99V**. **W6BET** & **W2KVA**. **W86GBR** & **KN6JN**, **W6GOWM**. **W89LLO** & **AF8A**, **KJ8E**, **NZ4K**, **W8TK**, **W8AUE**. **W11B:** **AA1FN**, **N11FN**, **WF1L**. **WS1F** & **W1P1MA**. **WU3A2** & **NS2K**. **WX8B** & **NA5Q**. **XX9AS** & **OH1EB**, **CH2BH**. **YU1HFG:** **YU1ML**, **YU1TS**, **Y21Z**. **Z30M:** **Z31GX**, **Z31GB**, **Z31PK**, **Z32RC**, **Z32RY**, **Z32ZM**, **Z32JA**, **Z32DR**, **Z33ILE**, **Z34TCA**, **Boby-san**. **ZF2WW:** **G3SKW**, **K5VT**, **K7GF**, **KC7V**.

STATION OPERATORS Multi-Operator Multi-Transmitter

4N1Z: **YU1DX**, **YU1GU**, **YU1QL**, **YU1VC**, **YU1LX**, **YU1ZQ**, **YU4LB**, **YU4NW**, **YU4RW**. **9A1A:** **9A3GW**, **9A3MJ**, **9A2AJ**, **9A2AW**, **9A2SD**, **9A2UE**, **9A2GQ**, **9A2MP**, **9A2MM**, **9A2JN**, **9A2LH**, **9A2LV**, **9A2KL**, **9A2DQ**. **AA4G:** **G4EKI**, **K1KNQ**, **NY1H**, **WW1N**, **AA4XR**, **KN4RI**, **WB4FNH**, **WB4ROY**, **WK9T**. **AA6TT** & **K5RC**, **N6ND**, **K450**, **AH3C**, **W4B0TU**, **A19X**, **A47NX**, **N7KA**, **A45B**, **F5JTL**, **W5FT**, **K10F**, **A60Q**, **N0VEI**, **N5SDO**. **AH0K** & **JE1JKL**, **JP10GL**, **JE2VCJ**, **JL2ZC**, **JJ30LZ**, **JR70MD**, **JE7BZ**, **J48RW**, **J49VDA**. **DA2UK:** **DA2CJ**, **DA2QX**, **F5PRQ**. **DL0BK:** **DF3HU**, **DF4AF**, **CF6L**, **DF2AB**, **DJ3UL**, **DJ4FZ**, **DL6TN**, **DL75W**, **DK7LN**, **DL4FZ**, **DL2ZT**, **DL3KUD**, **DL3LXB**, **DL5HBS**, **DL5KWA**, **DL8HCO**, **DL8LBM**, **DL8PY**. **EA9EO:** **Club**. **G3YBT/P** & **G3MZX**. **GU3HFN:** **G3MBS**, **G4U5XM**, **G4U4WR**.

HG73DX: **H41TJ**, **H41TD**, **H41DAC**, **H41DAE**, **H41AH**, **H41YA**, **H41YU**, **H41WD**, **H45GF**, **H45WJ**, **H45WV**, **H45AWH**, **H45ML**, **H45CCO**, **H45FM**, **H47VB**, **H47RY**, **H45OM**, **H45TI**, **H45WF**, **H46NF**, **H46OD**, **H46NY**, **H46ON**, **H46ND**, **H46PP**. **J1Y1DU:** **JH0NZ**, **JH0LFE**, **JF7TK**, **JP1JFG**, **JR0UJU**, **JE2BKJ**, **JF0MQX**, **J2UZYK**, **KJ3GAD**, **JE8JUB**. **J41YXP:** **JF10CW**, **JJ10JG**, **JP1AEQ**, **J51INN**, **JS1XEX**, **7K1EWD**, **7K1QOE**, **7L1CBL**, **7L1DGL**, **7L1ETO**, **JL2TSY**, **J52XHN**, **JL7CMG**. **J43YBF:** **JL1PEI**, **JH3NFZ**, **JL3AKW**, **J03LDN**, **J03QVG**, **JF4FV**, **JG4CLV**, **JK41TY**, **J49TQZ**. **J43YK:** **JG3MRT**, **JG3WDM**, **JF3VXV**, **JE9GMX**, **JM3FVL**, **J5DTS**, **JG4LSR**, **J44CVB**. **J43Z0H:** **JA3PIA**, **JH3DPB**, **J43PRR**, **JF3MAS**, **JF3DRJ**, **JG3JEW**, **JG3KIV**, **JB0PA**, **JM3XGJ**, **JH4IFF**, **JH4RHF**, **JH4NMT**, **J445F**. **J47YAA:** **JE1AMC**, **JF1CXX**, **JM1QPK**, **JJ1CVH**, **J03GKN**, **JF1SKL**, **JG7PJS**, **JL7LYM**, **JR0SPG**.

K0RF & **N2IC**, **W0UA**, **K08D**, **W0UN**, **K0EU**, **K0AY**, **W0CP**, **N7RT**, **W6UOF**, **K0UA**, **G3SZA**, **K6X0**. **K1AR** & **K1EA**, **K1ST**, **K1QO**, **K1MEM**, **W1RM**. **K3ANS** & **W3TB**, **W3FH**, **N26IM**, **NJ35X**. **K3LR** & **WR3G** **W3YQ**, **W50ML**, **N18L**, **N4BV**, **K8CX**, **K8CC** & **A8ABV**, **A8ABE**, **A8ABU**, **AC8W**, **K8DD**, **K8NA**, **K8MJZ**, **KF8QE**, **N8CC**, **N8CQA**, **W4ABR**, **W488R**, **W4X3M**. **KY1H** & **N51M**, **KB1W**, **KB1KE**, **W2IR**, **W1M1K**, **NT2X**, **A42QX**, **KB2R**, **NB1Y**, **AA1AS**, **N1J1**, **4S1N**, **N01P**, **W41ZAM**, **K14KB**. **KY3N** & **W83FIZ**, **W83HAZ**, **W83LZ**, **W83GN**, **W8FJ**, **WU3M**, **NF2L**, **K3IE**, **KY3N**. **N43C**. **L45M** **L48GE**, **L49VDA**, **L46WDA**. **L7YA:** **L2YK**, **L2B0W**, **L2YFN**, **L2YBMX**, **L2YDA**, **L33BCC**, **L33BN**, **L3Y34F**, **L3Y72B**, **L3Y751**. **N3RS** & **N3ED**. **N6DX** & **W6CDDP**, **AD6C**, **N6VR**, **W6B6SD**, **W6SR**, **N6RVZ**, **N6IC**, **G0CPK**, **AC6T**. **AD7G**. **NL7G** & **KL7Y**, **KL7PJ**, **KL7AF**, **KL7U**, **NL7VJ**, **N7DF**, **K0MVL**, **N70J**.

OH1AJ: **OH1JM**, **OH1LD**, **OH1WR**. **OZ5WO** & **OZ1BIZ**, **OZ3ZW**, **OZ3PE**. **R6L:** **UA6LV**, **UA6LO**, **UB3JV**, **UA6LQ**, **UV6PL**, **UA61501060**, **UA61501210**, **UA61501403**. **RU1A:** **RV1AO**, **RV1AW**, **RV1AC**, **UA1ABR**, **UA1ALZ**, **UA1ARL**, **UA1BX**, **UT3UA**, **UT5UGR**, **UV1AA**, **UA1-169-946**, **UA1-169-2475**. **UR8J:** **UB2JQ**, **UB2JZ**, **UB3JD**, **UB3JF**, **UB3JM**, **UB3JN**, **UB3JK**, **UB4BJ**, **UB4JF**, **UB4JMG**, **UB5JIM**, **UB5JDM**, **UB5JMR**, **UB5-067-2000**. **UB5JW:** **UB7-067-2**. **UK7I:** **RB4IZ**, **UB3JO**, **UB3M**, **RB4**

Number groups after call letters denote following: Band (A = all), Final Score, Number of QSOs, Zones, and Countries. An asterisk (*) before a call indicates low power. Certificate winners are listed in boldface. (All country terminology reflects the DXCC list at the time of the 1993 contest. The 1994 contest results will reflect political changes since that time.)

CW RESULTS SINGLE OPERATOR

NORTH AMERICA

UNITED STATES

K1KI	A	5,603,364	2867	153	523
K5ZD/1	A	5,569,290	3027	146	484
N6BV/1	A	4,941,490	3074	135	430
W2SC/1	A	3,784,710	2438	133	410
W1WEF		3,042,105	1997	131	406
W100		1,728,603	1123	139	398
K2TE/1		1,523,337	1151	116	355
W1BR		1,060,998	836	118	336
KS1L		1,000,846	765	119	350
W1ZK		989,985	765	123	342
KA1DWC		909,051	749	112	317
K3UOC/1		781,722	704	103	308
K1WJL		643,017	591	101	288
W1KMG		635,271	800	69	204
K1EFI		540,144	525	105	267
NB1B		488,832	481	101	283
W1FJ		454,595	490	87	248
K5MA/1		454,209	539	86	215
W6B6/1		211,440	321	63	177
W1FV		185,928	358	48	135
K2LE/1		128,968	244	54	134
W1KSY		60,187	157	47	92
W1CNU		40,068	127	32	76
KD10G		21,804	84	29	63
W1VIC		10,500	63	24	46
AF1D		2,940	36	16	33
K1ZZ	21	574,224	1210	35	123
K1RU	A	531,139	1135	33	128
KM1H	14	1,001,035	1892	39	146
			(Opr. K02M)		
K2SS/1	A	801,534	1528	38	140
W1RR	7	706,660	1392	36	142
W1CWU		62,126	200	29	89
W1MK	3.5	340,431	932	30	99
K2RR/1		98,670	302	25	90
K1WGM		93,636	320	24	84
W2AX/1		46,000	183	22	70
AA1M		4,746	42	12	30
W1BYH	1.8	48,552	279	15	53
W1CKA	A	36,992	66	16	52
*K1S1J	A	1,326,332	1059	120	349
*W1SE	A	1,085,750	900	109	321
*KM1X	A	933,262	890	94	284
*WA1FCN		672,695	664	99	256
*K1YUW		515,888	605	78	226
*W1S1		512,458	702	76	181
*K1EBY		503,063	563	84	235
*AA1HU		382,260	501	72	205
*K1JF/1		308,398	411	76	195
*K1TN		279,818	390	52	191
*K1VWL		224,460	326	78	180
*K1BK1M		201,984	293	77	179
*K5FUW/1		129,870	257	52	133
*N1JAC		83,941	219	47	96
*W1ZIK		66,470	203	59	111
*K1AZFK		35,500	103	44	81
*K1LUN		15,920	72	25	55
*K1VJSJ		4,326	37	13	29
*KQ1V	28	13,054	85	19	42
*KA1GTR		21,105	67	16	37
*KA1UJ		14,120	26	7	13
*W0MHK/1		41,511	153	25	76
K1ZM/2	A	5,579,164	2920	155	497
N2MT	A	5,019,948	2758	155	481
N2LT	A	4,892,272	2727	125	463
W2HPZ		2,211,691	1550	125	357
K2S1G		1,650,636	1242	117	351
K2ONP		1,476,860	1070	122	368
N1CC/2		1,131,321	965	107	310
W2AYVA		1,078,922	883	117	325
N2NU		911,632	963	103	265
KF2ET		1,037,251	657	139	374
K2DM		652,624	804	101	271
W2AS/M		634,480	800	100	280
N2CC		781,056	656	106	326
KA2HMJ		775,600	792	88	282
K3JG/2		762,420	708	107	281
W2ORX		670,071	607	103	298
W2MBM		558,126	630	108	219
W2AC		548,293	635	84	227
W2FXA		501,790	500	95	266
K2NV		486,315	556	81	222
W2VZQ		353,729	461	79	198
KW2J		342,240	462	80	196
W2F2A		282,240	381	78	202
N2MR		268,062	375	70	188
KE2WY		257,295	330	80	175
NA2Q		253,422	367	73	151

WA2UDT		175,536	300	67	80
W2NS		147,264	292	52	125
AA2GQ		83,650	178	52	123
W2GW		75,075	156	59	116
W2YY		33,360	102	36	84
WF2Y		27,485	89	44	71
K2FL		17,472	80	24	54
N2MZH		7,455	57	32	39
KA2DFO	28	2,343	27	11	22
K2MT	21	302,577	667	32	127
N2JUN		14,534,456	388	32	107
W0VU/2	3.5	21,312	122	13	51
W2FCR	1.8	19,610	101	15	59
N2WJ		1,534	25	9	17
*K2ZJ	A	1,904,654	1230	135	412
*K2SG	A	1,845,006	1524	106	320
*W2SRO	A	975,460	890	98	286
*K2EZU		576,281	539	107	302
*W2KHQ		348,975	448	75	200
*KM2L		269,620	376	74	186
*K2SHL		241,368	339	78	189
*W2AVEZ		133,133	238	65	144
*W2TZ		121,450	251	43	132
*K2JF		90,300	211	59	116
*W2DMV		62,208	149	47	105
*W2BJP		61,335	153	48	97
*K2SWZ		47,360	140	50	98
*W2HCA		46,569	130	37	92
*W2WBW		38,913	117	38	81
*K2MM		38,232	129	29	79
*K2DM		33,530	119	50	80
*N2PEB		27,255	97	40	75
*W2EZ		22,504	97	34	63
*N2LSK		18,705	78	30	57
*K2BSE		18,592	85	29	54
*AA2PQ		15,272	73	31	52
*W2NMF		10,136	65	17	39
*W2ZDU		9,577	58	22	37
*W2TQ		3,999	36	16	27
*N2LTK		2,738	27	15	22
*K2MFY	21	73,575	240	26	83
*N2INN		11,532	67	17	45
*K2P0F	7	44,064	163	27	74
*W2ASD		35,424	135	24	52
*N2J0H		24,276	123	16	52
*W2V0	1.8	11,832	78	14	44
K3Z0	A	4,959,360	2722	161	479
AA1K/3	A	3,372,720	2133	137	415
W3UM	A	2,213,810	1439	133	397
K3MD		2,006,000	1506	128	344
K3TE		1,510,816	1080	115	387
K3ZZ		1,413,840	1113	116	333
AK3Z		1,324,775	1002	115	360
K3DX		1,124,366	885	117	329
N3I		1,010,264	840	116	315
K4LD/3		536,805	502	117	278
KL7HR/3		407,364	463	95	237
W3KV		372,368	452	76	220
K3SME		335,315	371	103	234
*W3NX		322,322	375	101	221
N3KR		265,650	390	64	189
N3R		207,616	306	74	182
W3SC		199,184	306	67	169
W3NNA		179,622	222	90	216
K3MD		118,980	224	55	125
W3GL		106,896	206	72	132
W3FTG		81,993	169	59	122
W3SCW		50,826	150	39	90
N3I		22,400	82	42	58
W3FQE		8,100	62	16	29
N3UN		6,120	47	17	34
N3MTU		588	21	15	13
W3GN	28	31,233	169	25	62
W2ZQ	21	406,512	1003	34	110
AK3M		50,344	39	14	31
K3WX	7	542,300	1123	38	132
			(Opr. KH2F)		
K3BSY		132,928	992	32	102
W3BGN		8,481	86	6	27
K3GYS		6,210	49	12	34
K3C3	3.5	218,163	661	26	93
K3UA	1.8	7,956	60	11	40
*K3XJ	A	838,000	728	79	230
*W3UJ		436,112	552	73	206
*K3B3M		381,490	427	85	245
*W3QR		133,722	242	65	142
*N3QA		128,700	243	56	139
*AA3FY		110,208	242	40	124
*K3TLZ		96,307	189	58	135
*N3CZB	26	117	9	4	6
*W3WS	21	41,031	156	25	72
*W3CPB	7	20,559	115	16	51
*N3RW		13,451	79	16	45
K3Y/4	A	3,695,880	2256	140	430
K4P0L	A	3,629,774	2325	130	412
W4RX	A	2,802,442	1820	145	393
N6AR/4		2,700,578	1496	153	494
MA4R		2,511,028	1566	147	412
MA4S		2,241,871	1572	134	369
W4QJ		2,184,622	1562	129	370
W4ZF		1,522,790	1228	121	324
K4BAI		1,466,640	1091	20	365
W3VT/4		1,420,440	945	36	396
K7SV/4		1,407,348	999	33	365
W1HNV/4		1,294,950	1022	115	330

N4TO		1,278,680	882	135	385
K6W4		977,368	801	122	312
K4AMC		976,304	916	107	272
N4XM		950,190	858	113	293
N3UW/4		851,846	810	107	272
KX4R		756,756	619	125	316
N4UA		708,344	650	104	288
N4DMQ		548,493	545	93	270
W4QUN		518,035	523	103	258
K4GKD		446,620	490	95	231
N4MM		411,039	463	94	245
AD4KE		424,560	443	93	255
W4NTI		295,800	399	99	201
K4LNA		248,724	346	80	202
K4KUZ		245,127	296	103	200

AVERAGE UNIQUE PERCENTAGES BY CATEGORY

Here is the CW unique percentage for various categories. Each number in the table is the average of the top ten entrants of that category for which we have disks. The first # = U%. Second # = U + 1%.

	160	80	40	20	15	10
WORLD-AB	1.9/1.6	2.2/2.0	2.4/1.9	2.8/2.2	2.3/1.9	2.5/1.8
USA-AB	2.0/1.8	2.0/1.7	2.8/2.3	2.0/1.6	1.9/1.6	2.0/1.6
EUROPE-AB	1.6/1.4	2.2/1.5	2.3/1.9	3.0/2.6	2.6/2.1	1.2/1.2
WORLD-LAB	4.5/3.6	3.4/3.0	3.5/2.8	3.1/2.6	3.1/2.4	3.2/2.7
WORLD-QRP	0.0/0.0	2.3/2.3	1.2/1.2	0.4/0.4	0.5/0.5	3.5/3.5
WORLD-ASS.	3.2/2.6	2.8/2.1	3.1/2.6	2.3/1.9	2.9/2.4	2.2/2.2
WORLD-MS	4.0/3.1	3.2/2.6	5.1/4.1	5.1/3.9	4.3/3.4	4.0/3.6
USA-MS	3.1/2.4	4.2/3.1	5.5/4.0	4.9/3.9	3.4/2.7	3.0/3.0
EUROPE-MS	3.8/3.2	5.2/4.5	7.1/5.6	8.7/6.1	6.5/4.8	3.6/2.5
WORLD-MM	5.4/3.8	6.8/5.1	5.3/4.2	5.5/4.2	3.8/2.8	4.0/2.9
USA-MM	4.8/3.6	5.6/4.2	5.1/4.0	5.5/4.1	3.9/3.1	4.0/3.0
EUROPE-MM	8.2/6.3	8.4/6.6	7.7/6.0	10.6/7.8	6.7/4.8	4.9/2.9

*NSQW	345,514	465	88	186
*KR01	173,978	284	75	162
*NWFZ	110,088	229	63	130
*NDFZ	86,944	179	58	118
*K0B01IM	41,422	121	52	87
*N0FMR	37,375	145	43	77
*N0LEI	16,788	88	31	46
*W0WQ	4,590	42	24	30
*W0YRN	2,556	27	16	20
*W0BAV	9,900	71	15	40
*W0RQ	60,770	205	28	75
*K0BB	55,836	190	30	78

ALASKA

AL7CQ	14	409,812	1519	30	81
KL7RA	7	383,328	1224	31	90
AL7MX	1.8	8,322	182	10	19
*NL7DU	A	171,229	873	36	47
*KL7FAP	21	14,094	218	13	14

ANTIGUA

*V2/G6QQ	A	304,623	734	57	130
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BAHAMAS

*C6A/N4RP	A	646,722	1060	88	181
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BELIZE

*V31YZ	A	386,155	975	68	119
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BERMUDA

KBPYD/WP9	7	20,180	106	19	51
*VP9	A	713,310	1051	80	215
*WB8YJF					

CANADA

VE1XD	28	27,571	145	21	58
VE1ST	14	790,444	2044	33	113
VE1M	3.5	12,064	98	12	37
V01NA	1.8	148,050	661	20	70
*VE1AZN	A	1,043,616	1252	82	254
*VE1HA		856,716	934	91	281
*VF1L		691,470	1048	72	198
			(Opr. VE1AL)		
*VE1FP	14	113,238	595	22	59
CH2ZP	A	2,651,971	2317	122	335
VE2AYU		894,138	908	96	270
CH2AWR		129,670	296	61	124
VE2GH		67,512	247	39	77
*VE2CUA	A	863,604	1216	85	213
			(Opr. VK3DXI)		
*VE2WTF		98,000	225	57	118
*VE2FF		41,234	165	38	68
*VO2AC	14	97,510	660	17	53
*VE2DSX	7	61,336	342	21	61
VE3KP	A	664,608	955	92	209
VE30TL		352,519	505	77	169
VE3CWE		148,265	276	54	145
VE3TEE		51,590	207	37	73
VE3MM		26,068	113	35	63
VE3BR		3,364	60	10	19
VE3HX	28	26,180	169	21	49
*VE3ST	A	387,450	509	77	210
*VE3TDG		158,235	742	41	64
*VE3ZTH		92,826	198	61	130
*VE3JY		39,675	106	51	94
*VE3MNV	21	57,750	214	25	80
*VE3DSN	14	68,130	300	23	67
*VE3KUK		24,050	131	23	51
*XM4VV	A	1,203,840	2044	93	195
*VE4CE		128,318	328	58	108
VE5SF	A	128,184	336	64	104
*V05SF	14	273,060	1020	24	87

*VF5GC		1,551	71	6	5
VE6JY	7	256,032	888	34	92
			(Opr. VE6WQ)		
*VE6BF	A	426,399	836	85	144
*VE6BMX		314,959	741	72	119
*VE6HPT		140,459	593	48	65
VE7VR	A	577,626	1055	84	154
VE7IN		357,408	689	82	122
VE7UJ		81,654	344	47	46
VE7RBL	21	116,672	835	23	41
CH7SZ	14	814,506	2189	36	118
			(Opr. VE7NT)		
VE7MR		405,504	1228	36	96
VE7AV		279,377	1058	31	76
CH7SV	7	693,792	1877	34	110
CH7CC	3.5	213,853	1204	27	52
VE7BS	1.8	3,313	127	7	6
*CH7AHA	7	384,300	1327	33	93
*VE7CFA		297	17	5	4

*NP4Z	A	3,948,966	3926	108	326
*KP4TD		520,920	1388	58	122

SINT MAARTEN

*PJ5JP	A	177,660	612	47	88
*PJ5NA		64,750	457	32	36
			(Opr. K1NA)		

ST. CHRISTOPHER

V47KP	A	1,207,569	2222	77	176
			(Opr. K2DQ)		

TURKS & CAICOS ISLANDS

VP5RX	A	5,205,519	4781	120	339
			(Opr. AA2Z)		

U.S. VIRGIN ISLANDS

KP2A	21	964,960	2619	32	116
			(Opr. KW8N)		
*NP2I	A	2,202,228	3055	94	230

AFRICA

ASCENSION ISLAND

ZD8Z	A	9,086,940	5369	151	419
			(Opr. N6TJ)		
ZD8VJ	21	1,650,663	3235	36	135
			(Opr. G4ZVJ)		

BURKINA FASO

*XT2BW	A	181,178	400	59	98
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BOTSWANA

A22MN	7	544,688	1555	33	85
			(Opr. OH7XM)		

CANARY ISLANDS

EA8EA	A	12,703,752	6483	158	499
			(Opr. OH2MM)		
*EA8BGX	A	41,080	115	41	89
*EA8BF		16,587	101	21	36
*EC8AXM	21	224,640	941	19	61
*EC8AZM		58,218	315	17	45
*EA8NQ	7	205,485	724	18	77

GUATEMALA

TG/EA4KT	A	723,726	1758	64	122
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HAITI

HH2PK	A	1,380,248	2099	89	207
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JAMAICA

*DL5KVA	A	1,341,714	1994	93	226
			/6Y5		

MARTINIQUE

*FM5CW	A	445,816	1056	66	200
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MEXICO

XE1/AA6RX	A	3,758,225	3952	133	292
XE1VV		1,050,247	1506	103	204
XE2MX		206,233	359	78	144

PANAMA

*HP1AC	A	238,700	690	56	99
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PUERTO RICO

WP4IIV	A	1,039,635	1811	73	182
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REP. OF SOUTH AFRICA

ZS6EZ	A	6,924,175	4542	137	378
ZS6MG		289,172	584	56	110
*ZS6AJS	A	247,230	417	76	129

SENEGAL

6V6U	A	8,949,808	5242	138	436
			(Opr. K31PK)		

ZONE 33

*AA5DX	A	255,156	652	50	82
/MM					

ZONE 35

*EA1FBJ	A	135,026	266	60	121
/MM					

ASIA

ASIATIC RUSSIA

UZ9AXX	A	1,148,935	1328	85	225
UA9XF		216,840	464	47	148
RW9SW	14	266,760	745	36	94
UA9XW		27,625	166	19	46
UW9CK	3.5	221,208	787	21	83
UA9CA		196,524	735	22	81
UZ9CWW		164,886	677	20	77
UA9CC		133,453	483	28	85
UV9YI		87,824	459	20	68
UA9MA		80,000	385	21	59
RA9UK	1.8	15,529	143	13	40
*RA9X	A	4,972	40	11	33
*UW9TM	21	90,804	388	21	71
*RA9FF	14	59,808	278	22	62
*UA9AR		38,610	208	17	49
*UA9XC	7	63,204	291	19	63
*UA9AT	1.8	47,334	246	13	56
RW9AB	A	1,005,975	1530	73	190
UA9ZDA		355,040	1256	61	99
UA9KCL	14	20,945	151	18	41
UA9SR	3.5	60,117	345	23	64
RA9FU	1.8	3,192	130	11	10
*RA9SS	A	25,440	115	38	68
*RA9JX		12,958	132	27	35
*UA9ZAJ	21	30,528	277	26	38
*UA9ZCA		22,632	195	25	44
*UA9SEQ	14	5,478	81	10	23
*UA9JQ	7	354,311	1225	38	101
*RA9FA		273,921	956	32	91
*UA9SMM	3.5	82,368	351	28	71

AZERBAIJAN

*UD6DKW	A	216,240	385	56	156
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CYPRUS

C41A	7	1,307,944	2972	34	133
			(Opr. T93A)		

INDIA

*VU3VOA	A	83,122	576	46	93
*VU2FWW	21	6,020	56	13	

*JK3GWT	21,440	123	25	42	JORDAN				ALBANIA				*OK1FKV	295,612	595	63	200	*UV6AOB	4,066	81	7	31		
*JA4CSH	A 245,993	550	78	131	JY8VJ	A 7,164,512	4262	139	445	ZK/OK2PSZ	A 1,348,438	2120	102	332	*OK2ON	272,935	608	62	94	*LA4WEI	2,987	70	7	22
JH40YA	180,690	375	75	115	KAMPUCHEA				ZA1AB	14	225,630	1453	28	61	*OK1DKR	207,872	421	64	168	FAROE ISLANDS				
JH44XRN	161,541	306	71	122	UY7VK	A 501,650	1067	81	173	AUSTRIA				*OK1MK	179,586	556	56	140	DY1CT	A 491,904	1312	60	192	
JH44RTX	20,604	76	42	59	KAZAKHISTAN				OE5SPW	A 88,476	300	54	148	*OK2BND	92,225	400	36	117	DY9JD	1.8	128,847	1155	16	71
JH44CFS	10,212	64	30	39	UN7LZ	A 1,382,256	1517	87	261	OE3BRE	73,500	263	40	107	*OK2BEV	82,500	260	46	62	FINLAND				
JH44UYB	21	157,320	516	33	81	UN8PT	"	244,530	463	53	151	*OK1AOW	75,308	323	26	106	OH1AF	A 2,569,424	2209	139	433			
JH44XT7	7	2,451	45	9	10	UN2L	3.5	366,938	1053	35	108	*OK1SUO	30,825	215	24	51	OH6WZ	"	2,264,990	1974	125	369		
JH44LKB	1.8	3,720	47	14	17	(Opr. UW9AR)				*OK2AJ	27,722	200	21	62	OH2EC	"	1,814,000	1902	124	376				
*JK4KGB	A 402,480	507	99	213	UN5C	"	132,252	562	25	78	*OK1BLC	23,718	140	20	39	OH4AB	"	1,711,565	870	116	369			
*JR4GPA	A 294,624	515	77	139	UN7BY	"	61,698	272	15	62	*OK2VNV	17,272	189	12	56	OH2PM	"	1,543,284	425	132	394			
*JL4CVI	"	184,672	351	74	125	UN4B	"	36,783	221	15	62	*OK1DXV	11,067	9	27	66	OH6YF	"	1,137,750	344	100	310		
*JK4KSD	"	177,576	329	70	126	*UN7FW	A 527,429	683	88	215	*OK2FEI	5,390	34	24	31	OH1WZ3	"	700,205	742	105	334			
*JA4BAA	"	40,280	140	41	65	*UN8M	"	228,620	318	67	217	*OK1XW	28	6,572	58	18	35	OH6VR	"	671,400	810	92	303	
*JA4AQR	"	34,701	107	56	73	*UN7FAZ	"	225,792	581	43	120	*OK1BMW	5,661	44	21	30	OH2LU	"	287,259	516	70	193		
*JA4HX	"	14,194	140	47	63	*UN9PY	21	99,180	450	21	66	*OK1ABP	21	127,300	355	34	100	OH3NM	"	214,704	401	72	212	
*JA4ETH	28	1,914	27	13	20	*UN7R	14	36,360	190	19	53	*OK10JQ	"	100,300	361	30	88	OH3BI	"	68,020	167	57	122	
*JH4JNG	14	164,929	455	36	95	KOREA				EA6ZC	21	190,890	965	31	95	OH6NEV	"	48,396	147	51	97			
*JA1XZC4	"	16,653	116	21	40	*H.93AP	A	19,672	113	45	47	EA6BD	"	50,987	305	26	61	OH5PA	28	3,225	30	15	23	
*JAS5M0M4	"	2,520	30	15	20	*H.9UH	"	30,100	165	44	56	ED6XXX	7	929,660	2740	39	133	OH1AA	21	301,806	841	36	126	
JH5FXP	A 2,655,594	2156	134	304	KUWAIT				EA6AA	"	14,893	177	12	41	OH6MRA	"	137,692	667	33	83				
JASCKD	21	87,945	262	35	88	9K2ZZ	A 5,014,159	3734	137	372	*EA6GP	A 94,188	343	47	120	OH3R	"	62,752	46	16	37			
JASAPU	14	60,320	270	27	53	LEBANON				*EA6EJ	"	59,192	344	23	75	OH2BCD	"	23,232	155	19	44			
JASAF	"	7,650	66	18	27	*SM1TDE	A 232,132	627	8	29	EA6G	"	30,115	390	15	62	OH6RM	14	221,088	1008	26	70		
JAS1P	7	37,683	173	24	55	/AU	"	"	"	"	EA6H	"	30,115	390	15	62	OH7MA	7	651,672	1740	38	130		
JAS1GV	3.5	6,650	66	18	32	MONGOLIA				EA6I	"	30,115	390	15	62	OH1TN	3.5	86,691	524	23	88			
*J01WXJ/S	A 254,826	426	91	143	*JT18H	A 302,771	1010	55	112	EA6J	"	30,115	390	15	62	OH1GI	"	46,407	308	19	74			
*JG50YU	"	47,754	137	51	75	*JT1CD	"	138,908	852	59	95	EA6K	"	30,115	390	15	62	OH2BVF	"	40,426	354	19	63	
*JR5HTU	14	20,880	91	30	57	*JT1BV	14	14,563	214	18	31	EA6L	"	30,115	390	15	62	OH1MA	1.8	65,772	578	17	64	
*JR5MTS	7	21,150	103	27	48	OGASAWARA				EA6M	"	30,115	390	15	62	*OH3LIM	A 984,948	1313	101	321				
*JASPOS	"	16,298	106	20	38	*JD1BIC	A 30,095	323	35	30	EA6N	"	30,115	390	15	62	*OH6AAI	"	443,928	751	83	235		
*JASZD	"	3,848	36	16	21	*JA9BFA	"	5,600	64	21	29	EA6O	"	30,115	390	15	62	OH2VZ	"	270,216	498	76	206	
JAGWIF	28	33,920	159	25	55	/LD1	"	"	"	"	EA6P	"	30,115	390	15	62	OH2MAS	"	172,425	420	56	153		
JH6WHN	"	26,100	44	23	47	PAKISTAN				EA6Q	"	30,115	390	15	62	OH2UBF	"	172,072	391	65	209			
JH6NBW	21	128,800	473	31	99	AP2SP	A 14,500	100	14	36	EA6R	"	30,115	390	15	62	OH2KWC	"	103,668	374	40	119		
JF6DSZ	3.5	20,150	26	21	44	AP5N	21	393,875	1283	30	95	EA6S	"	30,115	390	15	62	OH1MRR	"	91,000	213	59	116	
JR6EZE	1.8	1,625	28	13	12	(Opr. SP5DIR)				EA6T	"	30,115	390	15	62	OH7NW	"	58,918	267	35	143			
*JH6TYD	A 242,816	406	78	146	*A71CW	A 2,484,460	1930	126	365	EA6U	"	30,115	390	15	62	OH6MBQ	"	56,017	273	32	107			
*J06JV	"	24,500	96	41	57	SAUDI ARABIA				EA6V	"	30,115	390	15	62	OH2LJH	"	39,260	200	36	94			
*JK6ISK	21	24,995	142	24	41	HZ1HZ	A 1,012,095	879	105	300	EA6W	"	30,115	390	15	62	OH2LW	"	37,760	190	31	97		
*JASDUU	"	5,280	46	14	26	SRI LANKA				EA6X	"	30,115	390	15	62	OH2KJW	"	22,825	207	28	66			
*JAS6ML	"	15,989	101	21	38	4S7N6ZZ	A 4,575,420	3313	144	411	EA6Y	"	30,115	390	15	62	OH2LZ	"	16,684	107	28	69		
*JASHP	"	5,513	53	14	23	4S7F6AOI	3.5	1,026	19	13	14	EA6Z	"	30,115	390	15	62	OH3HZ	"	1,856	87	27	49	
*JASBIF	3.5	4,650	51	14	26	*4S7	"	"	"	"	EA6AA	"	30,115	390	15	62	OH2LX	21	6,492	137	18	58		
JH7AUL	A 671,832	992	94	164	*4S7RJS	7	81,988	206	33	70	EA6AB	"	30,115	390	15	62	OH6LW	14	160,140	815	27	75		
JA7UES	"	226,688	459	76	108	*JA7FFN	"	8,190	74	17	22	EA6AC	"	30,115	390	15	62	OH2MPO	"	118,826	564	28	90	
JA7JI	28	3,255	36	14	21	*JE7JRD	"	5,565	60	17	18	EA6AD	"	30,115	390	15	62	OH6RC	"	65,500	328	24	76	
JH7DNO	21	319,858	844	34	100	*JA8KSD	3.5	10,285	83	43	63	EA6AE	"	30,115	390	15	62	OH3MC	"	34,621	170	24	65	
JH7FTR	"	272,371	803	33	88	*JA8AJE	A 113,652	267	70	94	EA6AF	"	30,115	390	15	62	OH2BRI	"	36,218	137	16	37		
JH7XGN	"	180,032	546	34	82	*JA8HGH	7	4,107	41	17	20	EA6AG	"	30,115	390	15	62	OH4ML	7	93,800	445	33	101	
JA7AXP	14	4,560	42	15	25	JA9CJW	A 647,088	790	107	205	EA6AH	"	30,115	390	15	62	OH3LX	"	6	1	1			
JA7MAD	7	42,942	149	34	68	JA9CCG	"	9,120	58	28	32	EA6AJ	"	30,115	390	15	62	OH3TY	3.5	35,490	138	16	62	
JH7UOL	"	3,472	47	14	14	JA9KDD	7	12,147	77	25	41	EA6AK	"	30,115	390	15	62	OH1BJJ	"	16,632	267	9	47	
JH7PKU	3.5	80,480	401	25	55	JA9HU	"	660	22	5	5	EA6AL	"	30,115	390	15	62	OH1BC	"	884	22	9	17	
*JH7AUL	A 671,316	992	94	164	*JA9XW	A 405,335	501	115	198	EA6AM	"	30,115	390	15	62	OH2BVE	1.8	7,515	154	6	39			
*JH7XQV	"	431,181	746	78	129	*JR9FY	"	4,070	42	19	18	EA6AN	"	30,115	390	15	62	FRANCE						
*JA7SUJ	"	237,440	409	87	137	*JA9XAT	26	300	9	7	8	EA6AO	"	30,115	390	15	62	F6CEL	A 1,201,404	1791	92	226		
*JH7BVA	"	172,557	286	94	137	*JA9YV	"	12,033	137	22	35	EA6AP	"	30,115	390	15	62	F6DIE	"	688,644	1139	79	254	
*JA7BVA	"	92,990	205	68	102	*JF85W	"	12,033	137	22	35	EA6AQ	"	30,115	390	15	62	F5TFS	"	574,560	1143	63	225	
*JH7CJM	"	10,428	92	34	45	*JG85W	"	12,033	137	22	35	EA6AA	"	30,115	390	15	62	TM4P	"	562,848	999	71	193	
*JH7FJW	"	4,180	40	26	26	*JH85W	"	12,033	137	22	35	EA6AB	"	30,115	390	15	62	(Opr. F5IO)						
*JA7JW	"	424	32	10	10	*JH95W	"	12,033	137	22	35	EA6AB	"	30,115	390	15	62	F5NKK	"	288,745	588	59	166	
*JF7QUE	28	12,485	76	21	34	*JH95W	"	12,033	137	22	35	EA6AC	"	30,115	390	15	62	F6FH	"	197,280	550	45	134	
*JA7MSQ	21	118,476	395	35	73	*JH95W	"	12,033	137	22	35	EA6AD	"	30,115	390	15	62	F5RAB	"	179,949	411	62	147	
*JM1YQW7	"	43,699	198	28	61	*JH95W																		

GERMANY

Table listing various German codes and their corresponding values, including DL2NBU, DL6RAI, DKSPD, etc.

Table listing codes like *DK2PH, *DL3ARM, *DL1KS, etc.

GIBRALTAR

Table listing GIBRALTAR code ZBZX and its value.

GREECE

Table listing GREECE codes *SV2BOH and *SV2BFN.

HUNGARY

Table listing various Hungarian codes like HA8FM, HA7YS, HA3LJ, etc.

ICELAND

Table listing ICELAND codes TF3GB and *TF3LB.

ITALY

Table listing various Italian codes like IR7A, IZUT, I3FDZ, etc.

JERSEY

Table listing JERSEY code *GJ/K2WR.

KARELIA

Table listing KARELIA code *UA1NFA.

LATVIA

Table listing various Latvian codes like LY2EO, LY2LP, LY2DD, etc.

LITHUANIA

Table listing various Lithuanian codes like LY2LJ, LY3BX, LY1DR, etc.

LUXEMBOURG

Table listing LUXEMBOURG code LX4B.

MACEDONIA

Table listing MACEDONIA code *Z3ZM.

MARKET REEF

Table listing MARKET REEF codes OJB, OJH, OJF, OJG.

MOLDOVA

Table listing various Moldovan codes like ER10A, ER1AA, ER3DX, etc.

NETHERLANDS

Table listing various Dutch codes like PA8LOU, PA8CLN, PA3GKW, etc.

NORTHERN IRELAND

Table listing NORTHERN IRELAND code GI8KW.

NORWAY

Table listing various Norwegian codes like LA6PB, LA9DFA, LA1TV, etc.

Table listing codes *LA3WBA, *LA1XDA.

POLAND

Table listing various Polish codes like SP8NR, SP2FNC, SP2UJ, etc.

SARDINIA

Table listing various Sardinian codes like IS0GSR, IS0MKU, IS0LWX, etc.

SCOTLAND

Table listing various Scottish codes like GM3YTS, GM4SID, GM3WJL, etc.

SICILY

Table listing various Sicilian codes like IB9T, IT9A, IT9ZY, etc.

SLOVAK REPUBLIC

Table listing various Slovak Republic codes like OM3PC, OM3RM, OM3NA, etc.

SLOVENIA

Table listing various Slovenian codes like S510, S51MF, S51AY, etc.

PORTUGAL

Table listing various Portuguese codes like *CT1DXT, *CT4DX.

RHODES

Table listing RHODES code *SV5.

ROMANIA

Table listing various Romanian codes like YO7DD, YO6KNW, YO4AA, etc.

SPAIN

Table listing various Spanish codes like EA28NU, EA7HDO, EA7CA, etc.

EA7TH	"	395,922	1279	34	105
EA7KH	3.5	259,407	1177	24	87
EA7XC	"	62,880	380	2	59
EA7BJ	1.8	14,912	150	12	52
*EA2CLU	A	642,960	1082	77	208
*EA3AEQ	"	603,896	1397	72	202
*EA5FV	"	436,835	817	69	176
*EA7IG	"	269,552	511	77	195
*EA3BOW	"	249,849	536	62	151
*EA5ACF	"	247,780	562	61	199
*EA3GHB	"	170,430	496	53	142
*EA1JO	"	140,184	367	45	132
*EA7JA	"	120,392	262	72	130
*EA2CN	"	89,210	294	36	95
*EA3DBO	"	60,988	158	64	94
*EA4AYX	"	53,457	212	33	70
*EA3GJZ	"	46,760	176	42	96
*EA7CWA	"	37,530	124	49	90
*EA4AV	"	33,565	122	49	86
*EA1DD	"	28,458	157	26	76
*EA4EMC	"	21,480	83	43	77
*EA3AI	"	20,605	121	27	38
*EA7HCB	"	20,468	160	26	42
*EA4VA	"	16,280	108	24	50
*EA7CP	"	13,140	102	2	56
*EA3GJ	"	3,994	103	22	52
*EA5WX	28	320	10	7	9
*EA7ADH	21	80,432	424	25	63
*EA1CSB	"	61,155	325	20	61
*EA1CS	"	43,092	237	21	55
*EA4BV	"	7,314	106	8	15
*EA3ACG	"	3,910	31	19	27
*EA1FEQ	14	2,121	55	6	15
*EA4UL	"	455	15	6	7
*EA2ARD	7	36,226	305	13	46
*EA7HAT	"	25,389	207	11	52
*EA1ADG	"	4,740	105	8	22

SVALBARD

JW8XM	7	384,354	1355	34	97
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SWEDEN

SM7PKK	A	1,052,768	1517	100	294
SM5ADE	"	834,144	981	86	212
SM5CLE	"	587,300	860	89	261
SM5BAX	"	129,759	361	44	123
SM7ATL	"	46,545	240	34	73
SM7EQK	"	621	17	10	13
SM8KV	21	128,158	419	36	103
SM5INC	"	101,362	412	28	90
SM6BJJ	14	175,260	622	28	87
SM2JEB	"	107,088	523	26	66
SM6JY	"	16,576	189	15	41
SM6LPF	7	60,008	298	23	81
SM2BUW	"	18,954	165	17	64
SM6DOI	1.8	53,534	503	14	57
*SM8BDS	A	340,992	666	66	190
*SM8COP	"	91,808	340	37	115
*SM8CVM	"	81,606	288	47	133
*SM8E	"	50,022	262	35	91
*SM8X	"	43,290	150	33	57
*SM8SEI	"	12,834	105	23	39
*SM8CGO	"	4,480	52	15	20
*SM8CUN	"	3,854	44	17	24
*SM8PGN	"	2,964	42	13	26
*SM8BEU	21	1,404	21	11	16
*SM8BW	14	123,758	178	11	28
*SM8CDF	"	38,380	179	11	29
*SM8GZ	"	36,872	44	22	66
*SM8GZC	"	36,366	168	22	65
*SM8AHW	"	22,495	176	16	39
*SM8PPS	7	7,897	108	12	40
*SM8CCY	"	6,250	85	9	41
*SM8CMR	1.8	6,109	141	5	36

SWITZERLAND

H89AGA	A	829,677	1355	90	257
H89DX	21	32,368	105	34	102
*H89ARF	A	338,688	678	75	181
*H89IBA	"	253,098	645	49	169
					(Opr. W7LFF)
*H89HLE	21	34,986	181	25	77
*H89APJ	14	62,100	340	23	67

UKRAINE

ED5U	A	2,098,759	2083	138	413
					(Opr. UT4UJ)
UT60	"	1,810,440	2190	117	353
RB1IZ	"	1,565,840	1541	130	399
RBSL	"	780,738	1344	108	296
RBSYZ	"	506,452	1310	99	259
UB4ME	"	439,725	710	81	244
UB5TN	"	258,187	498	75	232
UB5SBN	"	229,578	559	64	185
UB5VK	"	82,533	327	32	91
UB5INT	"	80,199	380	29	84
UT5UA	"	38,850	208	29	82
UB5EIT	"	20,972	100	15	82
UB4JN	"	13,855	158	20	65
UB5PDM	"	13,207	200	12	41
UBMEYT	"	10,680	91	21	47
					(Opr. UB4 060 175)
RB5JS	21	6,201	61	19	34

UB4JL	"	2,538	34	14	13
UB5NO	14	243,315	964	96	1865
UB5NBW	"	75,785	350	20	95
UB4HO	7	589,844	1670	39	128
UB5WE	"	365,148	1048	35	126
UB5CDX	"	166,375	632	30	95
UB4IH	"	58,552	348	26	78
UB5LEM	"	42,951	203	24	79
RB5PG	"	35,123	172	23	80
RB5PD	"	34,780	231	16	58
RB5VT	"	5,470	172	16	54
UB4QY	3.5	209,367	1003	32	97
UB5LCV	"	97,740	619	25	83
UB5UT	"	86,860	641	21	65
UB5FAN	"	72,709	608	16	75
UB5WCF	"	45,305	404	17	68
UB4JKO	"	30,024	409	12	60
RB5Y	"	27,058	219	19	64
UB5XBD	"	7,562	183	7	38
RB5BA	1.8	30,384	361	12	60
UB5ZKG	"	12,768	195	9	48
*RB5QDP	A	2,279,600	2694	134	422
*UT5UDX	"	696,864	1037	92	244
*UB5LCB	"	528,260	1061	69	236
*UB5EF	"	345,154	743	65	228
*UB5MP	"	228,340	624	53	192
*RB3J	"	156,220	486	50	164
*UB5BCJ	"	59,058	213	41	112
*FB5AT	"	55,348	270	31	106
*UB4UJ	"	6,262	78	13	31
*FB5UN	28	2,701	73	15	22
*UB5W	21	251,482	733	34	108
*UB5LXB	"	61,478	285	30	88
*UB4OM	"	42,238	229	27	71
*UB4AMPY	"	34,944	194	27	64
*UB5IAN	"	33,540	216	20	58
*UB4IRF	14	140,280	238	10	42
*UB3IQ	"	136,680	663	30	90
*UB5QIG	"	117,078	564	29	85
*UB5RAF	"	88,350	412	26	89
*UB5ELV	"	26,496	216	16	53
*RB5EEP	"	6,520	172	13	46
*RB5ERX	"	2,450	50	9	26
*UB5ZKE	7	48,852	323	20	72
*L5WF	"	30,504	208	17	76
*L5YTE	"	29,394	270	14	55
*RB5PE	3.5	58,256	533	19	69
*RB5IB	"	38,880	315	18	63
*L5TJUY	"	36,917	471	10	57
*RB4EK	"	24,888	370	11	50
*RB4INR	1.8	16,240	221	9	49
*L5SWBJ	"	5,560	154	6	34

WALES

GW8GT	21	601,160	1613	35	117
					(Opr. G4IFB)
GW3YDX	1.8	154,376	1030	19	73
GW3GWX	"	3,440	80	8	32
*GW3JI	A	431,760	883	51	200
*GW3JVS	"	85,738	258	50	113

YUGOSLAVIA

407AV	A	3,784,480	3185	138	407
YU7SF	"	66,856	289	37	100
YU7BW	21	406,224	1118	35	121
Y27A	"	62,084	308	24	59
					(Opr. YU7CM)
Y77A	14	585,904	1656	40	136
					(Opr. 4N70W)
YT1BB	3.5	90,301	824	15	58
Y21MB	"	57,870	496	18	72
*YU7LS	A	431,340	900	85	188
*YU1JU	"	378,450	750	75	215
*YU1HA	"	26,857	107	40	67
*AN7N	7	609,738	1174	33	118
*YU1HA	"	32,000	227	19	61
*YT8T	3.5	120,712	1043	16	63
					(Opr. 4N10XX)

OCEANIA

AUSTRALIA

VK2AYD	21	652,795	1826	29	92
*VK2BQQ	A	450,264	613	98	159
*VK1FF	"	359,464	660	64	132
*VK6GH	"	282,240	406	65	155
*VK6LW	"	49,920	27	37	43
*VK4XW	"	33,900	134	43	77
*VK2QF	"	30,004	200	23	30
*VK4XA	28	125,386	624	23	48
*VK8BE	"	1,425	25	8	11
*VK4TT	14	140,556	239	29	77
*VK3APN	7	140,900	480	29	71

CHATHAM ISLAND

*ZL7FD	7	432,200	1456	30	70
					(Opr. DK8FD)

EAST MALAYSIA

9M6HF	A	1,258,104	1872	81	147
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EASTERN KIRIBATI

T32BE	A	774,720	1375	88	104
					(Opr. WC5P)

FIJI ISLANDS

3D2MQ	A	216,474	674	49	60
					(Opr. IV3UHL)
*3D2HI	A	46,906	339	22	25
					(Opr. JA1KJW)

HAWAII

N6VI/KH6	A	2,119,476	2069	129	218
AH6JF	"	478,850	1327	59	63
KH6AC	"	11,678	86	29	27
KH6XT	3.5	117,312	820	19	29
KH6CC	1.8	68,250	547	18	24
*NH6T	A	2,461,536	2713	119	189
					(Opr. NBAX)
*NH6DV	14	9,021	102	15	16

INDONESIA

YB3AQE	A	423,936	549	97	179
YB3OSE	14	36,400	193	24	41
*YB6INU	A	162,176	309	62	119
*YB3UEM	"	29,452	128	28	46
*YB6TI	21	193,452	774	22	62

MARSHALL ISLANDS

W73C	A	397,605	705	81	114
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MIDWAY ISLAND

KH4	A	160,960	1636	72	74
					/N7TNL

NEW ZEALAND

ZL3SL	A	18,500	88	28	46
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PAPUA-NEW GUINEA

P29DK	A	507,698	902	76	118
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PHILIPPINES

SINGLE OPERATOR ASSISTED NORTH AMERICA

UNITED STATES

K10G	A	4,560,150	2271	157	551
AA2DU/1	"	3,510,573	1954	140	487
W1PH	"	3,528,104	1940	144	484
KC1F	"	3,147,934	1767	137	480
K2SX/1	"	2,845,854	1693	147	447
KZ1M	"	1,581,100	1140	118	367
N4XR/7	"	1,367,598	838	143	436
K1KP	"	1,147,704	988	106	302
WE1F	"	1,104,649	914	111	316
W16IH	"	1,047,344	708	141	395
K1G	"	1,039,909	774	124	355
W1NG	"	906,780	649	133	377
AK1N	"	836,140	765	96	292
W1AX	"	470,353	453	93	280
A11N	"	271,964	320	86	222
WA1ML	"	141,293	225	67	162
XA1DN	"	137,052	220	65	178
WS1A	"	131,502	242	62	140
N6RFM/1	"	106,109	194	67	136
KA1CLV	"	64,558	143	52	117
K1FWF	"	46,800	112	53	97
NG1J	"	45,360	121	44	96
K2AJY/1	"	43,960	104	53	104
KB1-H	"	43,099	124	41	90
W1QK	"	36,765	106	47	82
K5NA/2	A	4,490,980	2089	169	582
K2WK	"	3,135,485	1679	151	504
K2BU	"	2,060,792	1169	144	482
K2PS	"	1,965,314	1273	128	410
W4HQ0A/2	"	1,499,400	1110	119	361
W9NGA/2	"	1,317,006	890	128	394
NR2H	"	1,144,638	798	123	394
KY2T	"	1,132,032	758	119	417
W1G0/2	"	1,075,284	809	118	358
KF20	"	812,544	580	136	376
K8FC/2	"	648,627	556	116	345
K2TD	"	595,897	544	101	296
WAZUJ	"	442,035	388	114	309
K2JLA	"	408,421	418	100	253
K2QWE	"	400,438	421	97	250
N2AF	"	366,376	410	92	236
WAZWYR	"	323,128	355	100	238
WAZMKM	"	297,192	422	64	180
KB2DM	"	286,748	313	95	248
NA2M	"	251,141	322	89	200
KE2OP	"	220,732	294	77	201
WAZABN	"	87,657	200	62	121
K2SB	"	63,342	150	41	112
KB2NIJ	"	58,296	196	56	112
N2VW	"	40,866	113	41	101
WJ2W	"	36,195	106	46	81
NA2K	"	16,900	69	40	60
W2XN	"	12,033	67	18	45
WR2G	14	125,190	371	26	91
W2HG	"	119,930	312	32	102
KE2N	3.5	6,837	60	11	32
K3WW	A	5,056,464	2499	160	547
W2UP/3	"	4,007,604	2071	158	516
NN3Q	"	2,430,792	1534	128	418
AA3B	"	2,399,572	1405	136	466
W3FV	"	2,224,750	1407	127	423
K3NZ	"	1,331,889	917	124	383
N3NA	"	1,250,104	865	121	388
K3ND	"	1,223,942	746	149	440
NW3Y	"	1,203,998	920	111	348
W3MM	"	1,104,892	709	141	421
W3OV	"	1,007,720	764	118	354
KZ3H	"	915,444	746	115	316
N3X3	"	908,106	659	117	376
K3II	"	777,304	583	120	364
W3GK	"	776,896	627	121	332
K3ZA	"	774,573	708	100	281
K3SA	"	772,473	722	96	281
N3RR	"	536,900	443	125	330
K3Q0	"	507,846	563	89	229
W3MA	"	473,525	518	86	239
K3AT0	"	388,926	391	103	266
N3ARK	"	224,720	303	67	198
K3B-HX	"	122,783	233	63	136
NK3C	"	115,304	186	80	152
NK3U	"	67,893	151	61	122
K3NI	"	40,081	102	44	105
N3IMF	"	30,940	100	40	79
WM3L	"	27,100	98	34	66
WR3L	21	67,222	193	28	94
W3GH	7	447,702	883	37	137
N3A/4	A	2,166,395	1287	143	452
K4CEF	"	1,167,750	829	132	387
NJ4Y	"	851,006	681	128	333
K4PB	"	685,377	540	131	342
AB4ND	"	347,381	349	105	278
WB4VKW	"	338,679	394	92	219
KR4GJ	"	316,953	366	83	190
KJ4VH	"	292,990	317	113	240
W4FDA	"	279,033	363	79	202
KO4PY	"	256,286	376	71	183
KN4UB	"	247,296	318	75	201
K8UNP/4	"	239,645	313	91	196
WR4K	"	232,407	299	78	184

KD4FAZ	"	184,708	292	69	175
AB4H	"	178,560	233	90	189
N4KE	"	175,812	230	86	188
KN4QS	"	124,189	215	72	161
K5O11/4	"	109,564	198	62	134
KR4DL	"	84,870	160	73	132
AB4RU	"	84,108	188	46	115
W4OVU	"	54,720	137	56	104
AK6M/4	"	54,621	137	52	101
KO4RQ	"	40,131	103	46	99
K1KF	"	32,175	111	42	75
N4SLR	"	3,264	29	24	27
N4KG	7	421,520	862	37	139
W4ACUG	"	44,732	156	26	78
K5EC	A	275,706	389	92	197
WB5B	"	161,803	247	76	161
KASW	21	293,056	690	33	119
WB5UDX	"	151,174	408	31	100
W9NQ/6	A	677,735	580	139	306
K6VI	"	640,728	527	127	269
AB6WM	"	452,610	520	106	215
K6GX	"	415,063	492	105	216
K7EV	"	407,009	425	125	228
W6CAT	"	376,591	388	115	244
K6SS	"	361,446	405	108	213
W6BV	"	303,094	439	102	151
W6DUL	"	242,760	350	96	157
N16T	"	241,902	333	97	170
WR6R	"	224,990	274	104	198
KF6HI	"	184,345	299	97	132
W6RCL	"	182,390	300	94	136
AJ6V	"	172,200	305	76	127
K6GMC	"	156,657	255	89	148
AP6U	"	125,664	206	93	138
W6TKF	"	68,510	163	76	94
WABLLY/6	"	41,040	107	63	81
KJ6HO	"	11,264	57	40	48
KN6EL	21	78,473	317	30	67
W6ACTA	14	67,522	232	27	79
WJ7R	A	277,167	438	88	139
W7KJJ	"	65,631	156	65	102
K5TP	"	16,340	75	29	47
W7RIR	14	98,100	327	29	80
K7RIE	3.5	13,524	112	16	28
W6CG/8	A	2,369,184	1521	135	417
K8MFO	"	2,257,200	1232	164	496
AB8W/8	"	1,048,400	927	114	286
K8JJC	"	933,310	862	100	298
N8BJQ	"	584,766	569	105	273
AG8L	"	289,849	348	94	235
W8IQ	"	285,000	353	85	215
N8CVR	"	237,468	331	80	177
W8CAR	"	225,432	336	80	168
K8BEG	"	122,764	234	54	134
W8BOSE	"	82,432	168	64	120
K8FNU	"	80,136	143	71	141
K8BD	"	28,500	100	39	73
KZ8E	"	6,633	39	31	36
W88VPA	14	79,323	208	31	106
K9RHY/8	"	41,516	428	26	69
W8UVZ	3.5	177,920	470	34	105
W8XD	1.8	5,375	51	12	31
K8JP/9	A	1,352,480	910	138	397
W9XT	"	1,201,692	897	137	341
W9OP	"	803,700	593	119	304
K9XR	7	79,424	220	35	101
KF9H	A	1,985,888	1314	145	397
WY9J	"	699,600	658	124	276
K9KX	"	295,785	347	100	213
N9AT	"	136,425	196	88	167
KR9Y	"	81,540	169	51	129
K1ER/9	"	31,372	90	45	79
AA9CY	"	15,354	73	40	52
W88ZRL/8	7	53,340	151	34	93
W8SR	"	26,957	98	27	74

CANADA

VE3EJ	A	6,073,614	3160	173	593
CH2NH	"	737,394	1501	60	121
CH2NMW	"	94,512	337	53	75

ASIA

INDIA

VU2MTT	A	1,576,224	1506	116	305
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ISRAEL

4X/SS9PR	A	5,677,000	3947	127	374
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JAPAN

JF1SEK	A	791,954	799	122	237
JF3LGC	"	371,808	489	100	188
JK2VOC	"	139,272	415	65	103
JK2TOXJ	"	132,172	283	64	105
JA2EJ	"	34,136	95	44	92
JA7MYQ	14	100,092	313	33	81
JL2LPX	"	46,494	209	27	54
JH6SOJ	"	2,412	32	17	15
JH7AJD/1	7	5,850	43	18	32
JK1GK/3	3.5	26,520	139	24	54
JG1EQ3	"	9,454	77	18	34

J01VNM	"	5,452	45	15	32
JA2VSH/1	1.8	525	13	8	7

EUROPE

4U-GENEVA

4U1ITU	A	4,026,308	3411	136	436
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ENGLAND

G3XTT	A	1,502,501	1241	120	433
G3TXF	"	1,301,300	1130	129	421
G5LP	"	339,075	657	65	210
G40BK	"	8,880	54	32	48
G4PQQ	21	81,885	332	26	77
G3WVG	3.5	126,845	667	24	91

FINLAND

OH1MDR	A	264,901	564	76	211
OH2BVM	"	200,692	519	70	192
OH1XT	"	122,537	501	40	141
OH2B0	1.8	14,552	165	12	55

FRANCE

F5R8G	A	123,015	415	44	95
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GERMANY

DK3GI	A	3,737,205	2388	171	534
DJ2YA	"	2,356,200	1609	151	479
DJ2MEH	"	2,067,000	1621	149	487
DJ4AX	"	1,642,576	1168	149	447
DL1HCM	"	1,410,347	1221	130	391
DJ3NY	"	1,329,95			

AMIDON, INC. W2FMI BALUNS AND UNUNS TRANSFORMERS

HIGH POWER (2Kw - 10Kw) BALUN TO MATCH 50Ω COAXIAL TO:

			PART NO.	PRICE
12.5Ω	Balanced	Direct Connect Yagi Beam	4:1-HB50	\$39.95
50Ω	Balanced	1/2λ Dipole or Yagi Beam	1:1-HBH50	\$39.95
75Ω	Balanced	1/2λ Dipole at 0.22λ above Ground	1.5:1-HVB75	\$59.95
100Ω	Balanced	1/2λ Dipole at 0.22λ, 0.33λ & Quad Loop	2:1-HB100	\$59.95
200Ω	Balanced	Folded Dipole, Log Periodic Beam	4:1-HBM200	\$39.95
200Ω	Balanced & Unbalanced	Off Center Fed Antennas	4:1 HB/U200	\$59.95
200Ω	Balanced	10Kw Antenna Tuners & G5RV Log Periodic Beam	4:1-HBHT200	\$59.95
300Ω	Balanced	300Ω Ribbon Folded Dipole	6:1-HB300	\$59.95
300Ω	Balanced & Unbalanced	Off Center Fed Antennas	6:1-HB/U300	\$89.95
450Ω	Balanced	Twin Lead/Ladder Line	9:1-HB450	\$89.95
600Ω	Balanced	Rhombic & V-Beam Antenna	12:1-HB600	\$199.95

UNUN: for ground fed antennas, verticals, slopers, inverted L

PART NO.	IMPEDANCE MATCH	PRICE
2:1-HDU50 (2 Ratios) (connecting 50Ω coaxial to junction of two 50Ω parallel coaxial)	50:22Ω 50:25Ω	\$49.95
2:1-HDU100 (2 Ratios)	112.5:50Ω 100:50Ω	\$49.95
1.5:1-HU75 (connecting 50Ω coaxial to 75Ω coaxial)	75:50Ω	\$49.95
4:1-HCU50	50:12.5Ω	\$49.95
9:1-HU50	50:5.56Ω	\$49.95
1.78:1-HDU50 (2 Ratios)	50:28Ω 50:12.5Ω	\$49.95
1.56:1-HDU50 (2 Ratios)	50:32Ω 50:18Ω	\$49.95
1.78:1-HMMU50 MULTIMATCH UNUN (8 different ratios; can be used for Beverage Antenna)		\$69.95

Unconditional money back guarantee for 1 year on completed unit.

All designs, when used according to instructions, are guaranteed to give outstanding performances.

Comparisons with other matching transformers are invited.

NOTE: OTHER BALUN & UNUN TRANSFORMERS AVAILABLE. PLEASE CALL OR WRITE FOR ADDITIONAL DETAIL.

BOOKS: 1) "Transmission Line Transformers Design Handbooks", by Jerry Sevick, W2FMI, Amidon Associates, Inc., 1991. \$8.00 ea.
2) "Transmission Line Transformers", by Jerry Sevick, W2FMI, APRIL, 1990. \$20.00 ea.

UNUN SPECIAL KIT PRICE \$28.00! CALL TODAY!

Put MORE power into your ANTENNA and get better and higher signal strength. Use W2FMI Balun & Ununs by JERRY SEVICK.

- 98% (Avg) Efficient - (<0.2dB Loss)
- 1Mhz to 50Mhz
- Up to 10Kw
- Current & Voltage Type



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JAPAN				
JA3ZOH	6,344,438	3610	175	459
JA1YDU	4,994,142	3128	165	417
JA1YXP	4,282,278	280	162	384
JA3YKC	3,050,811	2174	151	362
JA7YAA	2,729,178	2258	138	300
JA3YBF	1,474,720	1306	129	287

EUROPE

CROATIA

9A1A	14,107,510	8297	194	636
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DENMARK

OZ5WQ	1,696,986	2558	91	323
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ENGLAND

G3YBT/P	404,505	739	72	231
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EUROPEAN RUSSIA

RU1A	8,113,152	5715	181	587
R6L	6,836,960	4487	176	584

FINLAND

OH1AJ	1,024,896	1090	115	356
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GERMANY

DL0KF	3,814,473	3349	145	466
DA2UK	749,856	1594	75	246

GUERNSEY

GU3HFN	1,450,872	2838	75	249
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HUNGARY

HG73DX	15,619,392	8780	166	668
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LITHUANIA

LY7A	5,659,540	4694	163	534
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NORWAY

LA5M	562,776	1156	60	202
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UKRAINE

UR6J	10,622,640	7024	194	646
US7I	7,492,578	5926	160	518

YUGOSLAVIA

4N1Z	6,227,906	5141	135	428
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CIRCLE 20 ON READER SERVICE CARD

IRELAND					OCEANIA					ALASKA					AFRICA					ASIA					YUGOSLAVIA														
E17M	3,815,169	3395	121	398	SP9KRT	280,053	645	80	181	W4MYA	1,191,141	840	137	374	4N1Z	6,227,906	5141	135	428	ALASKA					AFRICA					ASIA					YUGOSLAVIA				
ITALY					PHILIPPINES					ARGENTINA					CEUTA & MELILLA					HONG KONG					NEW ZEALAND														
IQ4A	7,510,110	3954	185	626	DX1HB	2,008,354	2530	91	178	L40F	10,236,352	5550	167	459	EA9EO	27,553,203	11049	179	658	HONG KONG					NEW ZEALAND														
IR2W	5,734,058	3632	161	538	DX3H	685,067	1429	68	95	LO3A	2,977,098	2991	101	238	VS6W0	12,631,437	8286	178	511	HONG KONG					NEW ZEALAND														
U2X	3,448,224	2726	149	465	SCOTLAND					SOUTH AMERICA					AFRICA					ASIA					YUGOSLAVIA														
IO2L	2,055,840	2118	124	356	GS4TMS	461,404	1283	57	187	ARGENTINA					CEUTA & MELILLA					HONG KONG					NEW ZEALAND														
IR2X	1,631,593	1570	127	364	SLOVAK REPUBLIC					ARGENTINA					CEUTA & MELILLA					HONG KONG					NEW ZEALAND														
IB6I	1,363,272	1674	113	403	OM3KFF	5,576,585	3671	161	524	L40F	10,236,352	5550	167	459	CEUTA & MELILLA					HONG KONG					NEW ZEALAND														
II1D	583,099	1301	72	197	OM3KAG	5,434,509	3656	158	539	LO3A	2,977,098	2991	101	238	CEUTA & MELILLA					HONG KONG					NEW ZEALAND														
IRQA	111,850	462	45	130	OM3RKA	3,059,065	2335	137	408	FRENCH GUIANA					ASIA					NEW ZEALAND																			
KALININGRAD					OM3RJB	1,319,362	1500	120	357	VENEZUELA					ASIA					NEW ZEALAND																			
UW2F	7,192,076	4354	182	606	OM3ROS	840	38	5	16	VENEZUELA					ASIA					NEW ZEALAND																			
LUXEMBOURG					SLOVENIA					VENEZUELA					ASIA					NEW ZEALAND																			
LX/DF0BK	1,531,896	2037	111	315	S55AA	2,300,310	2885	98	268	4M5I	11,222,746	6051	147	475	ASIA					NEW ZEALAND																			
MACEDONIA					SPAIN					UNITED STATES					ASIA					NEW ZEALAND																			
Z30M	6,281,040	6524	141	456	ED3KU	5,417,820	3896	153	482	UNITED STATES					ASIA					NEW ZEALAND																			
MOLDOVA					EA5WU	5,102,400	4024	149	451	UNITED STATES					ASIA					NEW ZEALAND																			
ER7Z	663,645	1269	77	216	SWEDEN					UNITED STATES					ASIA					NEW ZEALAND																			
NETHERLANDS					SK3IK	1,256,625	2007	83	292	UNITED STATES					ASIA					NEW ZEALAND																			
PI4COM	3,461,022	2672	150	449	SK6AW	820,600	1148	91	282	UNITED STATES					ASIA					NEW ZEALAND																			
PI4TLE	1,975,825	2306	97	292	SM3OSM	784,256	1303	89	263	UNITED STATES					ASIA					NEW ZEALAND																			
PI4CC	1,550,085	2290	95	268	SK5AA	764,094	1059	98	249	UNITED STATES					ASIA					NEW ZEALAND																			
PA3FNE	1,040,580	1506	96	273	SK6QW	623,760	1059	75	270	UNITED STATES					ASIA					NEW ZEALAND																			
PI4ZLD	819,150	1350	95	286	SK7JD	179,400	594	55	145	UNITED STATES					ASIA					NEW ZEALAND																			
NORWAY					SK7BQ	101,022	436	36	113	UNITED STATES					ASIA					NEW ZEALAND																			
LA1DXG	1,358,196	1575	109	374	UKRAINE					UNITED STATES					ASIA					NEW ZEALAND																			
POLAND					US0Q	4,929,172	4468	160	508	UNITED STATES					ASIA					NEW ZEALAND																			
SP9PDF	847,616	965	108	340	U77W	1,941,462	1009	144	449	UNITED STATES					ASIA					NEW ZEALAND																			
YUGOSLAVIA					UB4PWC	574,910	1102	92	209	UNITED STATES					ASIA					NEW ZEALAND																			
YUGOSLAVIA					RB4LWM	24,794	150	46	52	UNITED STATES					ASIA					NEW ZEALAND																			
YUGOSLAVIA					YU1HFG	237,495	671	59	222	UNITED STATES					ASIA					NEW ZEALAND																			

CHECK LOGS

Our thanks to the following stations who sent in check logs: 404DCL 9A1CRJ, AA4WX, AD4FX, CH9R, DA1Q0, DJ0SH, DL1JEI, DL1JF, DL2SZA, DL3HWW, DL3JON, DL3KUR, DL4XM, DL5BWE/CT3, DL5YWM, DL6CHG, DL6CKN, DL6KUA, DL6LZ, DL7UEO, D.8DZY, EA1ED5, EA1EWE, EA1FAL, EA1KW, EA3AJ, EA3GAS/MM, EA3GCV, EA4MS, EA5EFV, EA5EU, EA5ND, EA5OL, EA5TD, EA6VZ, EA7GZK, EA7HDW, EA7KN, EC7EAO, GD4UO, JA3XG, JH3JY, JL3SBE, JN2AMD, JR1XKU, K6FM, LA1FW, LA1KA, LA2QM, LA4LN, LA4NE, LA7UJ, LA8CE, LA8HGA, LA8HHA, LA8I, LA90AA, LA9HF, LA9I, LA9J, LA9K, LA9L, LA9M, LA9N, LA9O, LA9P, LA9Q, LA9R, LA9S, LA9T, LA9U, LA9V, LA9W, LA9X, LA9Y, LA9Z, LA9AA, LA9AB, LA9AC, LA9AD, LA9AE, LA9AF, LA9AG, LA9AH, LA9AI, LA9AJ, LA9AK, LA9AL, LA9AM, LA9AN, LA9AO, LA9AP, LA9AQ, LA9AR, LA9AS, LA9AT, LA9AU, LA9AV, LA9AW, LA9AX, LA9AY, LA9AZ, LA9BA, LA9BB, LA9BC, LA9BD, LA9BE, LA9BF, LA9BG, LA9BH, LA9BI, LA9BJ, LA9BK, LA9BL, LA9BM, LA9BN, LA9BO, LA9BP, LA9BQ, LA9BR, LA9BS, LA9BT, LA9BU, LA9BV, LA9BW, LA9BX, LA9BY, LA9BZ, LA9CA, LA9CB, LA9CC, LA9CD, LA9CE, LA9CF, LA9CG, LA9CH, LA9CI, LA9CJ, LA9CK, LA9CL, LA9CM, LA9CN, LA9CO, LA9CP, LA9CQ, LA9CR, LA9CS, LA9CT, LA9CU, LA9CV, LA9CW, LA9CX, LA9CY, LA9CZ, LA9DA, LA9DB, LA9DC, LA9DD, LA9DE, LA9DF, LA9DG, LA9DH, LA9DI, LA9DJ, LA9DK, LA9DL, LA9DM, LA9DN, LA9DO, LA9DP, LA9DQ, LA9DR, LA9DS, LA9DT, LA9DU, LA9DV, LA9DW, LA9DX, LA9DY, LA9DZ, LA9EA, LA9EB, LA9EC, LA9ED, LA9EE, LA9EF, LA9EG, LA9EH, LA9EI, LA9EJ, LA9EK, LA9EL, LA9EM, LA9EN, LA9EO, LA9EP, LA9EQ, LA9ER, LA9ES, LA9ET, LA9EU, LA9EV, LA9EW, LA9EX, LA9EY, LA9EZ, LA9FA, LA9FB, LA9FC, LA9FD, LA9FE, LA9FF, LA9FG, LA9FH, LA9FI, LA9FJ, LA9FK, LA9FL, LA9FM, LA9FN, LA9FO, LA9FP, LA9FQ, LA9FR, LA9FS, LA9FT, LA9FU, LA9FV, LA9FW, LA9FX, LA9FY, LA9FZ, LA9GA, LA9GB, LA9GC, LA9GD, LA9GE, LA9GF, LA9GH, LA9GI, LA9GJ, LA9GK, LA9GL, LA9GM, LA9GN, LA9GO, LA9GP, LA9GQ, LA9GR, LA9GS, LA9GT, LA9GU, LA9GV, LA9GW, LA9GX, LA9GY, LA9GZ, LA9HA, LA9HB, LA9HC, LA9HD, LA9HE, LA9HF, LA9HG, LA9HH, LA9HI, LA9HJ, LA9HK, LA9HL, LA9HM, LA9HN, LA9HO, LA9HP, LA9HQ, LA9HR, LA9HS, LA9HT, LA9HU, LA9HV, LA9HW, LA9HX, LA9HY, LA9HZ, LA9IA, LA9IB, LA9IC, LA9ID, LA9IE, LA9IF, LA9IG, LA9IH, LA9II, LA9IJ, LA9IK, LA9IL, LA9IM, LA9IN, LA9IO, LA9IP, LA9IQ, LA9IR, LA9IS, LA9IT, LA9IU, LA9IV, LA9IW, LA9IX, LA9IY, LA9IZ, LA9JA, LA9JB, LA9JC, LA9JD, LA9JE, LA9JF, LA9JG, LA9JH, LA9JI, LA9JJ, LA9JK, LA9JL, LA9JM, LA9JN, LA9JO, LA9JP, LA9JQ, LA9JR, LA9JS, LA9JT, LA9JU, LA9JV, LA9JW, LA9JX, LA9JY, LA9JZ, LA9KA, LA9KB, LA9KC, LA9KD, LA9KE, LA9KF, LA9KG, LA9KH, LA9KI, LA9KJ, LA9KK, LA9KL, LA9KM, LA9KN, LA9KO, LA9KP, LA9KQ, LA9KR, LA9KS, LA9KT, LA9KU, LA9KV, LA9KW, LA9KX, LA9KY, LA9KZ, LA9LA, LA9LB, LA9LC, LA9LD, LA9LE, LA9LF, LA9LG, LA9LH, LA9LI, LA9LJ, LA9LK, LA9LL, LA9LM, LA9LN, LA9LO, LA9LP, LA9LQ, LA9LR, LA9LS, LA9LT, LA9LU, LA9LV, LA9LW, LA9LX, LA9LY, LA9LZ, LA9MA, LA9MB, LA9MC, LA9MD, LA9ME, LA9MF, LA9MG, LA9MH, LA9MI, LA9MJ, LA9MK, LA9ML, LA9MN, LA9MO, LA9MP, LA9MQ, LA9MR, LA9MS, LA9MT, LA9MU, LA9MV, LA9MW, LA9MX, LA9MY, LA9MZ, LA9NA, LA9NB, LA9NC, LA9ND, LA9NE, LA9NF, LA9NG, LA9NH, LA9NI, LA9NJ, LA9NK, LA9NL, LA9NM, LA9NO, LA9NP, LA9NQ, LA9NR, LA9NS, LA9NT, LA9NU, LA9NV, LA9NW, LA9NX, LA9NY, LA9NZ, LA9OA, LA9OB, LA9OC, LA9OD, LA9OE, LA9OF, LA9OG, LA9OH, LA9OI, LA9OJ, LA9OK, LA9OL, LA9OM, LA9ON, LA9OO, LA9OP, LA9OQ, LA9OR, LA9OS, LA9OT, LA9OU, LA9OV, LA9OW, LA9OX, LA9OY, LA9OZ, LA9PA, LA9PB, LA9PC, LA9PD, LA9PE, LA9PF, LA9PG, LA9PH, LA9PI, LA9PJ, LA9PK, LA9PL, LA9PM, LA9PN, LA9PO, LA9PP, LA9PQ, LA9PR, LA9PS, LA9PT, LA9PU, LA9PV, LA9PW, LA9PX, LA9PY, LA9PZ, LA9QA, LA9QB, LA9QC, LA9QD, LA9QE, LA9QF, LA9QG, LA9QH, LA9QI, LA9QJ, LA9QK, LA9QL, LA9QM, LA9QN, LA9QO, LA9QP, LA9QQ, LA9QR, LA9QS, LA9QT, LA9QU, LA9QV, LA9QW, LA9QX, LA9QY, LA9QZ, LA9RA, LA9RB, LA9RC, LA9RD, LA9RE, LA9RF, LA9RG, LA9RH, LA9RI, LA9RJ, LA9RK, LA9RL, LA9RM, LA9RN, LA9RO, LA9RP, LA9RQ, LA9RR, LA9RS, LA9RT, LA9RU, LA9RV, LA9RW, LA9RX, LA9RY, LA9RZ, LA9SA, LA9SB, LA9SC, LA9SD,